

# Valley Farmer.

A Monthly Agricultural Journal, designed to benefit the Planter, Farmer, Gardener, Fruit Grower and Stock Raiser.

VOL. 9:

APRIL, 1857.

NO. 4.

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Saint Louis, Missouri.

**H. P. BYRAM, EDITOR AND PUBLISHER,**  
Louisville, Kentucky.

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**INDIAN CORN--ITS CULTURE.**

There is no country in the world possessing so wide an extent of territory in which the climate is so well adapted to the culture of Indian Corn, as the United States, nor is there any crop cultivated subject to fewer vicissitudes than this, and when we take into consideration the extent to which it is grown, and the various uses to which it is applied, we may not hesitate to regard it as the most important crop of our country, and its importance is rapidly increasing. While the increase in the production of other grain crops, in ten years, has been small, the increased quantity of Indian corn has been more than two hundred millions of bushels, and by the returns of the next census we shall probably learn that, in the ten years preceding, the increase has been double this amount. The returns for 1850 show that there were 31,000,000 of acres planted with Indian corn in the United States, which is 10,225,000 acres more than all the land cultivated in wheat, oats, rye, buckwheat, barley, and rice, united, each of which are reported as follows, viz: wheat 11,000,000; oats 7,500,000; rye 1,200,000; buckwheat 600,000; barley 300,000; rice 175,000 bushels.

Since the first introduction of corn into for-

eign countries from the United States, as an article of food for the inhabitants, its exportation has increased in a rapid ratio, and this increase will continue to augment as the people become acquainted with it as an article of bread, and with a knowledge of the proper methods of cooking it, and as improvements continue to be made in the means of preservation and shipment.

The cost of cultivating corn and the yield per acre varies much in the different States. The average yield per acre in the United States, according to the last census, was about 25 bushels. The highest average yield in any State was 40 bushels, and that was in cold, rocky Connecticut—a result that our Western farmers would hardly expect. The average yield in the Western corn growing States, is probably about 27 bushels per acre. According to statements contained in the last Patent Office Report, we find that some crops exceeded 130 bushels per acre. Of 35 crops of Indian corn offered in Massachusetts for premium, the average yield was 93 bushels per acre, and the average profit \$51.11 per acre. The largest crop was 138 1-2 bushels. Nineteen crops exceeded one hundred bushels, and but two fell below seventy-five bushels per acre. Now, no one acquainted with the climate and character of the country will for a moment suppose that these extraordinary crops are to be attributed to any advantage as to soil or climate possessed by either Connecticut or Massachusetts, but on the contrary, are far behind us in these respects. This great productiveness, then, is the result of manuring, proper preparation of the soil and thorough tillage. The same course of manuring and cultivation practiced there, we should not expect our Western farmers to adopt, because the cost of cultivating an acre of corn in Connecticut, although the

average profit as we have stated, is upwards of \$50 an acre, would in some instances nearly balance the market value of the crop. But what we wish is to bring about a more thorough system of cultivation, which may be adopted without any material increase of cost, and which might easily be made to double the average product of the country. The importance of this improvement in the culture of this crop, is apparent from what we have stated in the introduction, in regard to the rapidly increasing demand and the advance in the price of this great American staple.

That as large crops can be grown in the West as in any part of the country, we have the proof of facts to sustain. Some premium crops in Kentucky, now on record, have reached 159 and 190 bushels per acre. These crops, however, were the result of extraordinary cultivation which every farmer could not employ, and which we would not advise, if they could, but they serve to show that a reasonable outlay in labor in cultivation, is amply rewarded.

The first great error in the culture of corn is, in the practice of growing successive crops on the same land. This has been the custom particularly in the neighborhood of distilleries, though the error is by no means confined to these localities.

No two crops of the same kind should ever be allowed to follow in succession on the same soil when it can well be avoided. The number and variety of our crops are small when compared with those cultivated in Europe, where a well established system of rotation is maintained, requiring from four to six and sometimes more years to complete, and which tends to a constant improvement of the soil, while in our country, with the limited number of our staple crops, it is not profitable to extend the rotation beyond a three or four years shift, and hence the greater importance of a well established rotation with these crops.

The next great error with the Western farmers is, in not fully understanding the importance of deep plowing, and a mellow surface during summer, particularly if the season promises to be a dry one. Much of our Western land has a soil the depth of which can hardly be reached with the best plows. Such soil, for corn, should always be broken up deep. There are thousands of acres of land, naturally good, that has been under cultivation for ten, twenty, or thirty years, and has probably never been plowed more than four inches deep, and which now hardly yields half the amount that it did when

first brought under cultivation. Such land, if now broken up six, eight, or ten inches deep, according to the depth of the soil, with a double or trench plow, bringing to the surface portions that had never been acted on by the sun and atmosphere, and with good after-cultivation the yield might easily be increased fifty or one hundred per cent. Where the soil will not admit of plowing to this depth, let a more shallow furrow be turned, followed with the subsoil plow, so as to give the crop the benefit of better drainage, and of the mineral or inorganic properties that lie below the surface and that have heretofore remained beyond the reach of the roots.

The experience of several past seasons of extreme drouth have taught observing farmers the importance of an improved method of cultivating this crop. Last season we saw several fields that had received proper cultivation, which yielded half or two-thirds of an average crop, while other fields with as good soil, in the same vicinity, under different management, or rather for the want of management, hardly produced five bushels to the acre. To guard against the effects of drouth, the object must be in view with the breaking up of the field, and in the after-culture the surface should never be allowed to become so dry after a rain as to form a crust before the plow or cultivator has broken it. This practice will insure a fair crop of corn in almost any season, however dry it may be.

This course of cultivation, if universally adopted, and which could be easily carried out by every farmer, provided no more land is put under cultivation than can be well managed, would add to the ordinary crop on good land, twenty bushels to every acre. But put the increase at the low estimate of but ten bushels per acre, it would add to the annual crop of the country 310,000,000 of bushels.

#### PATENTS ON AGRICULTURAL IMPLEMENTS.

For the week ending February 10th 1857, there were fifty-eight patents issued from the United States Patent Office. Of this number twenty-three related either directly or indirectly to Agriculture. Among this number are seven Seed Planters and five Harvesters,—machines entirely unknown in practice to the American farmer forty years ago. Not only can almost every species of farm work be performed now in a greatly improved manner, but the same labor can be done in one-third of the time required to do it a few years ago, and yet every day brings to light some new machine, calculated still to aid in this most important of all industrial pursuits.

### Progressive and Profitable Farming— Farm of Thomas H. Collins.

While great and important improvements are common in almost every department of human industry, it is a little cheering to those who are devoting their time to the cause to know that the practice of farming, in many sections of the country, shares, in some degree, in these improvements. We have frequently alluded to improvements in various departments of farming, and one object is to keep our readers fully "posted" in this respect. But, says one, give us facts,—it is the facts we want, and not theory. This is exactly what we aim to do and nothing else.

There are some farmers among us who more generally keep up with the improvements of the age than others do. These we often visit with the view to furnish our readers with some account of the improvements they have adopted.

Some months ago we visited the farm of Mr. Thomas H. Collins, and made some notes in regard to his operations, with the view to publication, but various other matters have crowded them out until the present time.

Mr. Collins' farm consists of 100 acres, lying upon the bank of the Ohio river, about two miles below New Albany, Indiana. Previous to his coming in possession of it, about eight years ago, it had for a long time been subject to the most ruinous, skinning course of cropping, until the crops, as then grown, would not pay for the labor of cultivation.

#### DEEP PLOWING AND DRAINING.

In this condition Mr. Collins took possession of the farm, intending at once to carry out a system of improvement in every respect. Upon a soil of one or two feet in depth, instead of barely plowing it but three inches below the surface, as it had been for twenty years previously, he turned up the soil to the influence of the sun and air, to the depth of a foot or more. This at once opened a new field of luxuriant *pasturage* for the roots of his growing crops, and the result was an immediate increase in the yield, of at least one hundred per cent.

This, like most of that bottom land lying along the border of the river, is highest near the river bank, leaving a large portion of the land back subject to excessive wet, particularly in the spring, with no adequate outlet for the water. Through the back part of this farm meanders a very flat, crooked creek, bordered with a broad, low bottom, embracing about

sixteen acres, upon which the water stood for a considerable portion of the year, rendering the land entirely useless for cultivation. At this time but few experiments in land draining had been made in this country, and these were chiefly in the State of New York. But Mr. Collins determined to make the trial upon this land. At the time of our visit he had made about three miles of land drain, at a cost of about \$4,000. As no drain tile machines had been introduced into this section of the West, slate rock, admirably suited to the purpose, was substituted. This slate is found in great abundance upon the border of the river, immediately in front of the farm.

Seven main drains have already been laid, with cross drains leading into them at distances of every 50 feet. This work is still continued each year, as other operations of the farm will admit. The sixteen acres of creek bottom, before too wet even for the wild grasses to flourish on, is now the most valuable and productive portion of the farm. The upper portion of the bottom receding from the river back to the creek, has been so much improved by drainage as to more than pay all the expense from the increase in the crops cultivated.

#### MANUFACTURE OF MANURE.

Whether Mr. C. procures any manure from the city, we did not inquire; but his method of manufacturing the article at home, is worthy of note. Near his barn and stables an excavation has been made, perhaps 100 feet square. Into this, all the weeds, vines, stalks and old straw—indeed everything of vegetable material grown upon the farm that can be readily gathered, is thrown into this place, with which all the manure from the stables is incorporated. By drains all the slops from the kitchen are conveyed to this place of deposit. When an excess of water, from protracted rains, accumulates, it is conveyed to the meadow through underdrains, which is found to be a most efficient and powerful method of manuring.

#### IMPROVED IMPLEMENTS.

Here too, all the improved farm implements may be seen, required upon a farm of this size. Among the many articles in this line, we were struck with the high estimate in which the proprietor regards the farm roller. We have often remarked that if we were to be confined to the use of but one, the harrow or the roller, we certainly would choose the latter, and such appears to be the estimate in which Mr. Collins regards that implement, for we found no less than four,

all in working order, in his tool house. Among these is Croskill's clod crusher; a common six feet wood roller; an iron section roller for meadows and heavy work generally, and a roller used in the cultivation of potatoes, with three sections, which will roll three rows at a time. This implement, we believe, is the invention of Mr. C., and was described in the Valley Farmer for March 1856, in the article on the cultivation of potatoes.

#### CROPS CULTIVATED.

Mr. Collins may be regarded more as a gardener than as a farmer. Situated so near the city, and within easy access to the boats in the lower river trade, the most profitable crops are found to be potatoes, cabbage, turnips, and other garden vegetables and fruit. In 1855 eighteen hundred barrels of potatoes were grown on eighteen acres of land. These were all shipped in the summer, by the owner, to the New Orleans market. Each barrel has the brand of the grower upon it. These were sold at the highest prices.

The potatoes are usually dug and sent to market early in the season, leaving the ground in excellent order for a fall crop of turnips. The flat Dutch varieties are cultivated. The seed are put in with a drill, in rows, so that they can be readily thinned to the proper distances and the ground between the rows hoed or cultivated. This often secures a crop, when if they were sown broadcast and left to take their chances with the weeds, dry weather, &c., they would prove a failure.

The fruits cultivated are principally peaches, strawberries and tomatoes. These are preserved in air tight cans and sold to the river boats. Of hay and grain, but little more is grown upon the farm than is necessary to sustain the stock required upon it, other crops being found more profitable.

In detailing the operations upon this farm, or of any others we may speak of, our object is merely to show the effects of an improved system of management, with the view to encourage others to adopt it. What one farmer can do, another may accomplish under similar circumstances. The effects of draining and deep plowing upon this farm have increased the crops more than three hundred per cent.

The subject of land draining is new in this country, but will soon be better understood and more frequently practiced. Upon this, we shall have something more definite to say in future numbers of this work.

#### LIME KILNS

##### CONSTRUCTION OF—BURNING LIME—ITS APPLICATION TO LAND—LARGE RED CLOVER.

J. E. D., of Springfield, Mo., wishes information upon the above subjects:

#### CONSTRUCTION OF LIME KILNS.

There are various methods of constructing these. But the cheapest plan, where it is practicable, is that adopted by the commercial lime burners along the Ohio river. Their method is as follows: A suitable place at the edge of the river or creek bank, convenient to the limestone, is selected, where the height of the bank is ten or fifteen feet. The face of the bank is cut down until it is smooth and firm. A hole for the kiln is then dug upon the bank, just so far back as to leave the arch four feet deep from the front to the nearest side of the kiln. The size is usually about Eleven feet in diameter at the top; Thirteen feet at the widest place in the middle, and about Ten feet at the bottom; and the depth, say Thirteen feet, more or less, according to the height of the bank. If the earth is clay, no wall is required. The arch is cut through from the front, and is about five feet high and about three and a half feet wide. This, after it has been used a while and is burned out, is laid up with masonry even with the inside of the kiln; below this height is an ash pit twelve inches deep and eighteen inches wide. Two long stones extend across the front of the arch into the wall on each side, which are several inches thick and are placed two or three inches apart, the upper one being two and a half feet below the top of the arch.

*Filling the Kiln and Burning.*—The stone is broken into pieces from the size of a man's fist to twelve or fifteen inches long and from two to four inches thick and not exceeding double this in width. At the bottom, the small slab stone, not exceeding eight inches wide, are laid up perpendicularly around the out side of the kiln, larger pieces being used as the width of the kiln increases upwards; as this wall is carried up, the centre of the kiln is built up, leaving a flue twelve or fifteen inches wide between the centre of the outside wall. This middle wall is brought forward to a point in front until it extends on a line even with the inner face of the fire place or arch, that is, making the centre twelve or fourteen inches more in diameter from front to rear of the kiln than it is wide, which gives a uniform width to the flue all around. The flue is carried up the same width to the top of the arch, where it terminates by laying stones

across that will reach from the outside to the centre wall. In laying up the wall and filling the kiln, care should be taken to place the largest stones nearest the fire. All the stone should be laid up loosely, so that the flames will penetrate through them. After the arch and flues are covered the stones may be thrown in promiscuously, reserving the smallest pieces for the top. The wood may now be placed in the arch and the fire kindled and gradually increased. The time required to complete the burning depends somewhat upon the kind of stone,—usually about three or four days and nights, requiring a little experience to determine definitely. When the fire has done its office, the smoke ceases to appear at the top, and the flame rises through the interstices at the top. One or two fair trials will teach any intelligent man how to do the work in a proper manner.

A kiln of the dimensions we have given, will require the consumption of about 25 cords of wood, and will yield about 900 bushels of lime.

Where the object is to burn only for farm use, as in the case of our correspondent, kilns of smaller dimensions, to suit the exact wants, may be made. But the size and proportions we have given are found successful and most economical.

Kilns made in this way, in good clay, will last for years, with a little mending at the top, where the outside of the wall is sometimes sealed off by the frost and rain. This is done by placing pieces of plank up endwise around the kiln when it is filled, and pounding soft clay firmly around between them and the old wall. If the earth is sandy, the sides of the kiln must be walled up with fire-proof stone or brick.

Where a bank cannot be found, kilns are made above ground, and walled up much after the form here given.

*Perpetual Kilns*, or kilns in which the process of burning is continued for months, by adding stone and coal at the top and drawing out the lime at the bottom without letting the fire go out, are in use in some parts of the country. But where wood is abundant and the means of constructing the common kilns are so easily available, as in the West generally, it will hardly be deemed necessary to describe their mode of management.

#### APPLICATION OF LIME TO THE LAND.

The quantity of lime required per acre, and the time and mode of applying it, depend upon

the character and condition of the land and the object for which it is applied.

The uses of lime in agriculture may be enumerated as follows:

1st. It aids in pulverizing the soil, by acting chemically upon the silicates therein, dissolving a portion of the silica and liberating the potash and soda. Upon some soils, for this purpose, from 100 to 500 bushels per acre have been used.

2d. Lime corrects injurious substances in the soil, as sulphate of lime, &c.

3d. Lime has a tendency to pulverize and improve the texture of stiff, clay soils; for this purpose large quantities are used per acre.

4th. It decomposes inert vegetable matter in the soil. For this purpose we should suppose it most applicable in the case of our correspondent. From 20 to 50 bushels per acre is sufficient.

5th. Lime constitutes a considerable ingredient in leguminous plants, and hence small quantities are useful when incorporated with the manure, and added to the soil.

6th. It hastens the decay of stable manure and putrescent substances, and may be sprinkled over them when plowed into the soil, but should be plowed under soon after it is added. In this mode of application one bushel to two or three loads of manure is sufficient.

Lime is used to a great extent in Pennsylvania and Virginia in connection with clover for the improvement of the soil. It is applied to the land before plowing, from 20 to 50 bushels per acre every three or four years, and followed in the rotation.

Lime, like ashes, is useful to meadows in destroying the mosses and decomposing the accumulated vegetable matters on the surface. If not required for this purpose, it may be mixed with muck or old manure, and applied as a top dressing.

Lime is best prepared for applying to land, by dropping it in small heaps exposed to the air and rains until it is reduced to dry powder and then spread broadcast upon the surface and plowed and harrowed in, either in the spring or fall. Or it may be put up in large quantities together and covered six inches deep with earth, until it is slaked, and then applied.

*Large Red Clover*.—The question of our correspondent on this subject is answered in the Valley Farmer, on page 205 of last volume. It has no material advantages over the common Red Clover now cultivated, which will be large enough if properly sown.

### Geological Report in Relation to the Soils of Kentucky.

One of the wisest acts of the Legislature of Kentucky was in making an appropriation for, and authorizing a geological survey of the State. We only regret that the appropriation had not been sufficiently large to admit of a more thorough survey and of the widest circulation of a full Report, for the benefit of every inhabitant.

That portion of the Report of Dr. D. D. Owen, the State Geologist, which relates to the soils of Woodford and Jefferson counties, is now before us, giving the analyses of the various soils, by his assistant, Dr. Robert Peter, one of the most accomplished chemists in the country. As the present Report is confined to the two counties mentioned, it may be inferred that it is a matter of local interest; but this is not the case. Its bearing is not even limited to the broad Valley of the Mississippi. It affords a valuable lesson to every farmer in the country, and we present it with the hope that it will be read with interest by all.

The first half of the Report is confined to the comparative analyses of soils from the blue limestone regions of Woodford county and that lying immediately over the cellular magnesian limestones of Jefferson county, which goes to show that the superiority of the blue limestone soil does not depend, as is usually supposed, on its greater richness in *organic* matters, since, in fact, it contains 0.225 less of these principles than exists in the Jefferson county soil. This is also proved by comparison with the Fayette county blue limestone soil, given in a former Report, for in that soil the organic and volatile matters are only 0.4 more than in the Jefferson county soil. But the result shows a very considerable difference in the *inorganic* constituents, viz: the phosphates, sulphates and alkalies; and although these in either soil do not amount to a large percentage, except in oxyde of iron, which is 5.481 per cent. more in the Woodford than in the Jefferson county soil. But estimating these ingredients contained in an acre of soil to the depth of *six inches*, it shows that the soil from the eastern part of Jefferson county requires, to make it equally productive with that of Woodford county—

71,625 lbs. of ferruginous clay,  
27,050 lbs. of limestone or 16,188 lbs of burnt lime,  
3,175 lbs. of bone earth,  
2,161 lbs. of gypsum,  
4,148 lbs. of unleached ashes,  
2,455 lbs. of common salt.

110,614 lbs. total.

In relation to this deficiency, Dr. Owen remarks:

"In place of the 3,175 pounds of bone earth and 2,161 pounds of gypsum, there might be substituted, with advantage, 3,000 pounds of sulphate of lime, that is, bone earth which has been treated with sulphuric acid, by which results an acid phosphate of lime and gypsum, which has been found in practice, an excellent form of application of the highly important inorganic constituents of soils. Soda and lime are also advantageously employed in agriculture, by dissolving common salt in as much water as is required to convert the caustic lime into fine powder and slaking the lime with this brine. However, all these ingredients, except the ferruginous clay, can be obtained by the application of farm yard manure, of which there is always more or less on every farm, but not in the manner in which it is usually found, after long exposure to the weather, along side the stable, but in fact stable and cow-house manure or in manures which have been properly preserved under cover and in such a manner that neither the soluble portions have been drained away in liquid oozings from the manure pile, nor the ammonia volatilized into the atmosphere; in manure, in short, which has been carefully heaped up under shelter in an inclined plank pen, with a tight floor, constructed so that all the liquid part can drain into a tank or cistern, from which it can be pumped over the manure heap from time to time, or carried separately onto the land,—while at the same time care has been taken to fix the ammonia which would otherwise escape into the atmosphere, either by the addition of alternate layers of muck, decayed wood, or other vegetable mould, charcoal, powder, or better than all, so much diluted sulphuric acid as will prevent any odor being emitted. To such a manure pile, the lime slaked with brine is also a good addition, as the sulphate of lime and chloride of calcium, thereby formed, are excellent absorbers of ammonia."

Dr. Owen further remarks in relation to the inorganic portions of the soil that, "It is now well established that phosphates, sulphates, alkaline earths, and alkalies are essential constituents of plants, and must form a part of their food; in fact the cereals cannot come to perfection and form nutritive grains for man or animals, if the soil is destitute, or even very deficient, in phosphoric acid, and though we are accustomed to view a soil proportionately rich to the larger or smaller quantity of vegetable mould it contains, yet the presence of the above *inorganic* constituents are essential and more difficult to restore when once exhausted, inasmuch as they cannot, like the organic, be appropriated out of the atmosphere, but must be renewed either by disintegration of the rocks which contain them and from which they are originally derived, which must necessarily be a slow and tedious process, or by the labor and expense attendant on the transportation of guano, bone-earth, and a few other varieties of manures in which these substances are contained."

But it is to some startling facts, of the first importance to every cultivator, that chemistry reveals by the analysis of the soil collected from a field in Jefferson county, which had been 25 or 30 years in cultivation, compared with that of the virgin soil gathered adjacent to it, that we would call special attention.

These analyses show, that during the period that this field has been in cultivation, there has been carried off from *each acre of it*, estimating to the depth of *six inches* over the surface, by the succession of crops harvested, assimilation by stock, filtering and washing—the following essential ingredients, viz :

45,607 lbs.	of organic and volatile matter,
16,204 "	allumina, oxyde of iron and manganese,
1,019 "	carbonate of lime,
522 "	magnesia,
182 "	phosphoric acid,
196 "	sulphuric acid,
548 "	potash.

64,278 lbs. total.

Upon this result the author remarks : "Here then, we have the amount in pounds which would be required to be restored to *each acre of this field* to bring it back to its original fertility, provided the influence of cultivation has only extended to the depth of six inches ; but these amounts would require to be doubled, if the exhausting influence has extended to *one foot*."

In Europe, where the different kinds of manure both organic and inorganic have a commercial value, the

45,607 lbs of volatile matter would be worth	\$28,50
16,204 lbs of alumina, oxyde of iron and manganese, would be worth only what it might cost to restore it, either by means of the subsoil plow or the cost of hauling it to the land, if beyond the reach of the subsoil plow.	
1,019 lbs of carbonate of lime, worth	63
522 lbs of magnesia, worth	25
182 lbs of phosphoric acid, worth	1,82
196 lbs of sulphuric acid, worth	24
248 lbs of potash, worth	8,22

64,278 - - - - - \$39,66

This result shows that the cash value of the materials required to restore *each acre of this land* to its original fertility is \$39,66." But this is but a mere item of the real loss sustained by the cultivation of this land in following this exhausting system.

We have neither the time nor the space to enter into a detailed estimate of the loss the cultivator of this field has sustained in the diminution of each successive crop during this period of 25 or 30 years. The cost of the required labor to plow and cultivate an acre of

corn that yields but 30 bushels, or an acre of wheat that yields but 12 bushels, is as great (with the exception of handling the grain) as it would be to cultivate the same land yielding *double* these amounts. We will assume then, for example, that the cost of the labor of cultivating an acre in corn that yields 30 bushels, or an acre in wheat that yields 12, is just equal to the market value of these crops, so that the farmer realizes nothing for the interest on the value of his land, nor profit on his labor. But suppose that under a better system of cultivation, the acre yields 45 bushels of corn, or 36 bushels of wheat, then he realizes a profit of 15 bushels of one and 12 bushels of the other.—But admit that by a still more thorough system of cultivation, the acre of corn is made to reach 60 bushels, and the wheat 48 bushels, here, then, is double the amount of profit, while the labor of cultivation remains the same. Now, could the cultivator of this land be consulted, we believe that he would admit that when new, it was with the same labor and the present improved implements, would produce double the amount that it can now be made to yield. What then, is the aggregate amount of the loss this farm has sustained in the crops cultivated, under this exhausting course of tillage during this period of 25 or 30 years, besides the depreciated value of his land in consequence? Now it is well known that it is this ruinous course of cultivation in Virginia, that has peopled Kentucky, and it is owing to a continuation of the same system, or rather the want of a proper system of cultivation, that is now prompting our farmers to leave Kentucky for new and more fertile lands in Missouri.

By a proper course of cultivation, not only could double the amount of crops have been produced from this same land, but instead of its present exhausted condition, as is proved by the analyses, it might have been richer now than when the surface was first broken by the plow.

It may be asked—what, then, is the course to be pursued to remedy this constant drain of the fertility of the soil? We answer—*Drainage*, where necessary, *deep and thorough tillage*, the *careful management and application of all the manure that can conveniently be made upon the farm from every variety of material within reach*, and a *rotation of not less than three or four crops in a course—in which clover or some other green crop shall be introduced and turned under*.

In reference to the importance of the infor-

mation conveyed by this analysis, Dr. Owen says:

"By far the most extensive part of the above ingredients, if required to be purchased and hauled on the ground, would be the organic constituents; but fortunately there are other more economical alternatives of reclaiming the lost humus of a soil. The most abundant proximate principle of humus is vegetable fibre, which by decay, yields chiefly carbonic acid and the elements of water. It is by supplying these to plants that it is mainly efficacious in agriculture. Fortunately there is an inexhaustible store of these principles in our atmosphere, and the farmer has the power, if he knows how, to appropriate them to his use from that source, without seeking further. Strange as it may at first sound, land can be *manured* from the atmosphere; that is, it can receive from it the fertilising elements of the organic constituents of manures. But this must be effected through the intervention of the mineral, inorganic or fixed constituents of the soil; that is, those earthy principles which cannot be burnt off by fire, and are, therefore, found in the ashes of plants—such as the phosphoric and sulphuric acids, lime, clay, and alkalies—for which an abundant supply of these and ammonia a luxuriant growth of leaves and roots overspread and penetrate the ground, having during their growth fixed a very large proportion of their weight and substance out of the atmosphere; it is upon this principle that the improvement of land by green cropping is based, which, when turned in, passes rapidly into a state of decay, furnishes in this way an immediately available and abundant supply of carbonic acid, oxygen and hydrogen, in the proportions in which they exist in water. But these substances can moreover be condensed out of the atmosphere by good tillage, for the more porous and loose a soil is, the more it is penetrated by air and rain water, in which more or less carbonic acid is always condensed. Thus, if the farmer takes care that his land is sufficiently supplied with these inorganic constituents above mentioned and a certain amount of the nitrogenous principles, he need not go to much expense in hauling the humus or its equivalent substances, mainly consisting of woody fibre, as the atmosphere has always a liberal supply on hand. Indeed the nitrogenous principles can also be obtained to a considerable extent from the same sources; since there are abundant emanations continually volatilizing ammonia and carbonate of ammonia into the air, which are returned to the earth by every shower of rain or fall of snow, besides what is absorbed by a porous, well tilled soil, particularly if that soil has a notable quantity of clay and peroxide of iron."

There are other important facts afforded by this Report, which we shall introduce in another number; particularly those which refer to the general comparative fertility of the soils of Kentucky, and the prairie soil, collected by Dr. Peter, from lands upon the Upper Mississippi. The comparison of these specimens reveal facts of the highest importance to the cultivators of the prairie soil.

## CULTURE OF TOBACCO.

On account of the high price of tobacco, we presume a large crop will be grown the present season, and a few hints on its culture, at this time, may not be out of place.

It is generally thought that but little skill is necessary to cultivate it successfully. But this is a great mistake. Perhaps there is no crop that will better reward the skill and labor bestowed upon it than tobacco. Skill is required to grow it well, skill is required to cure it, and skill is required to properly prepare it for market. Some planters almost invariably raise a prime article, and others as invariably sell an inferior article. The difference is caused by the degree of skill and intelligence possessed by the planter. We believe that by intelligent and skillful management, planters generally might raise crops a third or more larger from the same ground in cultivation.

### PREPARING A BED FOR THE SEED

is the first thing in spring to be attended to, in preparing for a tobacco crop. This bed is generally made on new ground, inclining to the South, and well protected from the cold winds of the North and West. Leaf mold and a small mixture of ashes constitute a good soil in which to start the seed. The bed should be well and thoroughly pulverized and raked clear of roots, &c., before sowing the seed. Sometimes the plants are started in a hot bed, under glass—but this is not often the case. The seed bed should have careful attention. No weeds should be allowed to grow. If the plants come up too thick to properly develop themselves, they should be thinned out.

### PREPARING THE FIELD FOR THE PLANTS.

The field selected for raising the crop should receive a deep plowing in the fall and likewise another plowing in the spring. It should also be harrowed well and then rolled with a large wooden roller, so as to more effectually pulverize the soil and crush all the lumps that remain after the harrowing.

The field is then laid off in rows from three to four feet apart each way. Hills should then be formed with a hoe into which, at the proper time, the plants should be set. Of course the quality of the soil will have much to do, in regard to the amount and quality of the crop.—Land that has recently been cleared of the forest, is generally excellent for tobacco. So light and rich loams produce good crops. Having the field in readiness the next thing to be attended to is

## SETTING THE PLANTS.

This should be done after all danger of frost is over and the plants have attained sufficient size. A cloudy, rainy day is the best for that purpose, or immediately after a rain will do. Should no rain occur at the proper time, the seed bed should be thoroughly watered so that when the plants are taken up some of the soil will cling to the roots. After the plants are put out they must be carefully watched and should any fail to grow, or should the worms destroy any of them, their places must immediately be filled from the seed bed.

## AFTER CULTIVATION.

The plants having been set in the field, it now remains to cultivate them. One of the best things for that purpose is the cultivator. They should be cultivated both ways and the soil kept loose and fine. The cultivator or plow should go through each row several times during the season. No weeds should be allowed to grow. Now is the time to bestow particular care on the crop. All the labor that is now put on the crop will return a good per centage.

The plant is grown only for its leaves. Eight or ten of these only are allowed to grow. The flower stalk and small leaves must be taken off so as to cause all the energies of the plant to be thrown into its broad leaves, which, alone, are valuable for market. The blossom bud, called a button, makes its appearance as the plant begins to show indications of ripening, and this must be removed. At the foot of each leaf stalk a shoot appears which must also be removed.

As we have before said eight or ten leaves only are allowed to grow. In very rich soil sometimes as many as twelve are allowed to grow. The top of the plant above the eight or ten leaves must be removed. As often as once a week the plant must be wormed and suckered. In a future number we will speak of cutting, curing, stripping, pricing, &c.

## OLD TAN BARK FOR MANURE.

J. J. W., of Tennessee, asks: Is spent tan bark good for manure? Yes: It is valuable applied in many ways. As a manure alone it can hardly be compared with peat, because of the larger amount of gallic and other acids it contains, but with an admixture of lime these are in some degree neutralized. The most profitable way in which old tan bark can be employed is as an absorbent of the liquid manures in the stables and yards. If a supply is kept constantly

on hand and placed so as to absorb the urine from the cattle and horses in the stables, and changed as soon as it becomes saturated it will be found equal to the best stable manure.

If applied directly from the yard, with the addition of a little lime, it will be found not only valuable as a manure, but on heavy clay soils its mechanical effect is important. Unless it can be obtained in large quantities we should prefer to apply it for mulching fruit trees—raspberry vines, grape vines, strawberry plants and the like. An application to all of these except the strawberry, to the depth of from three to six inches will prove very beneficial, particularly in dry seasons, which seem now to prevail. When applied to strawberries one or two inches is sufficient.

In countries where manure is in great demand it is sometimes charred in the same way that peat is, and used in stables as we have recommended above. In this form it will answer a better purpose on light porous soils than when applied uncharred. If within reasonable hauling distance we would recommend you to apply in some of the forms we have mentioned all you can get.

## How to Exterminate Gophers.

We have frequently been asked for some method to exterminate gophers. We know to our sorrow the vast amount of injury that they cause upon the farm and garden. Indeed there is no pest that will compare with them. In examining a hedge, not long since that we planted two years ago, we found that the gophers had bored immediately under the hedge, cutting off every plant, in some places, forty or fifty yards in length. The plants still stood upright, but upon taking hold of them and pulling slightly, the plant would come up, with the root eaten square off. We have also lost many fruit trees in the same manner. In the garden they are very destructive. They will follow a row of peas soon after planting, and not leave one in the row. They are also very destructive to meadows. Sometimes they entirely prevent the use of the mowing machine, in cutting the grass, by raising almost myriads of hillocks throughout the field. In our own State, (Missouri,) or at least in many parts of it, we know they are doing an incalculable amount of injury annually. The question now is, which is the best method to get rid of them? Will our readers who have had experience in exterminating them give us, through the *Valley Farmer*, their plan for extermination. If they will give an effectual

Rural World

cal method, they will be entitled to the warm thanks of thousands of farmers, who are greatly suffering by them. Working as they do, under ground, we know it is very difficult to destroy them.

We will give some of the methods that we have heard of, and some that we have practiced, for exterminating them, if our readers know of any better method, by all means let us have it.

It is said that some farmers have driven them off, by buying a box or two of rotten herring, and drop the herring in their paths, and they will speedily leave. Rotten cod fish we presume would have the same effect.

Another plan is to open a hole in the side of the hillock which it has recently formed, and the gopher will soon bring dirt to fill the hole you have made, when you can shoot it. They make mounds sometimes of considerable size, (we have seen them from two to three feet high, and from fifteen to twenty feet in diameter,) which they inhabit in a body when the ground is full of water, and then they may be dug out.

They are frequently caught in glazed jars, or steel traps, in the following manner. A hole is dug a foot deep, or more, under their burrows, and the jar is sunk in this hole, and covered with a leaf of cabbage, a piece of paper, or something of the kind. Then cover the burrow with a piece of plank, leaving it open, and when the gopher passes, it will step on the covering of the jar, and fall in it—the jar being smooth it cannot get out. They are taken in a trap as follows: The burrow is opened about a foot wide and a common rat trap is placed on the bottom of the burrow and set, and then covered with fine earth. The burrow is then covered with a plank—a passage being left open for the gopher, and the light excluded, by covering with fine earth, and when the gopher passes, its weight springs the trap, and it is caught. The boys can soon be taught to do this properly, and the offer of a dime, or a quarter for each one taken, will be a sufficient inducement for them to prosecute their labors with laudable exertion. Pieces of potatoes, apples or anything else that they are fond of, may be poisoned with strychnine, and then placed in their burrow.—We believe corn meal may also be used for the same purpose. But we have penned this article, more for the purpose of drawing out the experience of our readers in regard to them than for any other object.

Health, happiness and prosperity are enjoyed more by the farmer than by any other profession.

#### ADVICE to YOUNG FARMERS—No. 3.

In our last we spoke of the selection of a farm. In this we want to speak of the selection of a wife. Now do not laugh, young reader, but be sober. We are not about to perpetrate a joke. We are in serious good earnest. Long ago we learned that love and matrimonial jokes are unwise and improper and not to be tolerated. The subject is one of too great importance and too pregnant with the holiest interests of humanity to be made a theme of sport and jest. We deprecate the common practice of joking about love and marriage. It is low and vulgar. We see many evils growing out of it. We should as soon laugh about religion or jokes about the highest interests of one's soul. Then believe that we speak in seriousness in what we say on this subject.

Choosing a wife is more important than choosing a farm. In all its bearings there is no more important step in life. There is none that requires more judgment. To be a judge of a good horse, cow, or farm is what every farmer should seek to be. But how much better to be a good judge of a good woman. How few, even of the married, properly appreciate good womanly qualities. How many, who scarcely know what such qualities are. We have then to say to the young farmer, study woman, womanly qualities, and woman nature with more care than you do stock, grain or soil. Learn what in woman makes a true help-mate, wife and mother. Learn what the good farmer wants in his wife, then what you want in your wife.

The farmer should of course, as any other man, choose a wife to his taste, whose opinions, sentiments, feelings, habits of life, hopes and aims harmonise with his own; one in his own sphere of society; of his own attainments, and near his own age. All the principles that should guide any man in the choice of a wife, should guide the farmer. But there are some things the farmer should consider more especially. The first of these is *Health*. The farmer with a sickly wife is half undone. Health and strength in the farmer's wife are as important as in himself. Let this be considered. Let the young farmer learn the conditions of health, the signs of health and the essentials of health, and then choose his wife accordingly.—No farmer wants a frail house plant for a wife, that can stand neither frost or wind or sun. Neither does he want a willow that bends to every burden and half gives up the ghost at the sight of work or care. Health and strength are

the first requisite in any wife, but especially the farmer's.

Next comes a taste for rural life. A fashionable woman, a lover of show, a walking dry-goods advertisement, a street-yarn spinner, a gossip, a woman fond of town life, town excitements and society, is not the woman for a farmer's wife. On the contrary his wife should love the farm and its products, should love natural scenery, love nature above art, display or social amusements. She should love rural pursuits, the garden, the field, the forest. She should have a taste for farm life. Milk, butter, cheese, poultry, fruit, pork and beef barrels, should not frighten but please her. She should prefer the country to the town.

Next to be considered is a woman's business qualities, her ability to manage and execute well. If a man conducts his farm well he wants his house conducted well. The house is half of the farm. The table, the larder, the cellar, the wardrobe, are as much as the garden, the barn, the orchard and the field. And it requires as much judgment to manage them well. See to it then that your wife has good business talents, good sense, a good head and a good hand, as well as a good heart. Find the qualities you want in a woman before you offer your hand. If you wish to be successful in your business and in life, choose well. If you wish to be happy and useful, choose well. If you wish to have a good home, a good family, choose well.

[Written for the Valley Farmer.]

### SEED CORN.

I have noticed an article or two in the Valley Farmer upon the subject of seed corn. What the writers there say, will do very well, but they stop "short of the mark." Seed corn should be gathered in the fall, as soon as all the sap in the cob is dried out. Crib it in the husk. Just as soon as winter breaks up, husk it and make your selections of the largest, best matured ears, and, in shelling, be sure to avoid all ears that the point of the grain breaks off, leaving a black appearance, in the end of the grain next the cob. This has been heated and the germ destroyed; red cobs are the best. After the corn is carefully selected and shelled, make a solution of 3 oz. nitre, in 4 gallons of tepid water, in which soak one bushel corn 12 hours; then drain off the water, give the corn a good coat of tar, (never mind the feathers,) then sprinkle over some leached ashes or slaked lime stir well and plant immediately—three inches deep, leave no clods on the hills—the nitre is a preventive against various insects, worms, &c. The tar forms a coat around the grain and preserves the germ in cool, damp weather. The

ashes adhering to the grain will promote the growth of the plant. I have prepared seed corn in this way, and procured a good stand without replanting a hill, while my neighbors would have to furrow out their grounds and plant over again.

[Written for the Valley Farmer.]

### HEDGING AND SWINDLING.

Messrs. Editors:—I have for a long time deferred what I have considered a very unpleasant duty to the farmers of the South and West, and I fear I should not discharge it now, had I not been urged to do so, not only by my own convictions of right, but by many who have seen and some who have suffered from the delinquencies which I am about to expose.

I feel that I am personally responsible, and to some extent to blame, for many of the losses that have already occurred; and that I should be greatly to blame if I did not, at whatever hazard, do all in my power to prevent them in future. Your readers will doubtless recollect that I have, on various occasions, favored the plan of having *professional hedge setters* make the hedges for our farmers, by the rod, at a fixed price, and I see no reason to discourage that course now,—but I do see a vast difference between *professional hedge setters* and *professional swindlers*. And it is only against these latter that I would now caution the farmers and the nurserymen alike.

During the past five years there have been three classes of men entered upon the hedge making business in the West. One class, and I hope a large one, of *able, honest, and competent* men, who have intended to do, and have done their work well—to the satisfaction of their employers. But I fear that this class have often lost money, rather than made it, through the carelessness of the farmers in tramping their hedge rows with their stock, teams, &c., &c., and other causes. Another class, mostly young men, *honest* but neither *experienced* nor *competent*, who, of course, began with great enthusiasm, but failed from their own practical incompetency and inexperience. A third class, who are neither *honest* nor *experienced* nor *competent*, and who still can probably show more flattering recommendations, and make more loud pretensions than both of the other classes together. Their game is this: They procure from their friends or political partisans, such recommendations as they need—from county Judges or other distinguished men—(or at least they have them, whether forged or not, I cannot say); and on this basis they buy plants and take contracts. Now not one of these men who recommend them, perhaps ever saw a rod of hedge in their lives. If their certificates are genuine, therefore, they are good for nothing; but from some inquiry I have reason to think they are sometimes forged. Such a fellow once came to me to get my certificate, and as a lure, purchased 700,000 plants of me, paid a small sum down in gold, appeared to have plenty of money, well dressed and well educated; agreed to pay for the rest of the plants when forwarded to his

order; but after he got the plants he was among the missing, and has never been heard of since. All the farmers for whom he set plants, I was told, were in like manner cheated out of their first payment. Another with like pretensions ordered \$500 worth of plants and after getting them left for parts unknown. I wrote to those gentlemen in the State of Ohio, where the first named hedge setter hailed from and where he said he had a widowed mother, and where he had set hedges to the very great satisfaction of his employers, whose certificates, of course, he had on hand, all written and printed and flared out, from "Gen. Such-an-one" and "Judge So-and-so." But lo, and behold! the postmaster informed me that no such person and no such parties had ever been in the place "within the memory of the oldest inhabitant." I presume this same man is, under some other name, setting hedges still somewhere in the West or South; and if he still manages practically to steal his plants, and get his first payment for setting them in cash, he must be doing a first rate business for himself, so far as percentage of profit is concerned; for the usual charge is from 20 to 25 cents per rod for the first year, which is not too much for honest work honestly done; but as these fellows do it, one man and a boy will set about one mile per day, which comes to sixty-four dollars, at 20 cents per rod, or seventy-nine dollars at 25 cents per rod.

Now the plants of the quality these fellows use, can be bought anywhere at the most, for one mile, for twenty-five dollars, which leaves the pretty sum of fifty dollars per day or thereabouts, for the professional services! of this said man and boy. But if they manage to get away without paying for their plants, as they sometimes do, (as I happen to know to my sorrow,) it leaves them the pretty sum of sixty to eighty dollars per day, enough to compensate, one would think, as remarkable professional services as even these gentlemen claim in their papers and letters of commendation.

Another mode of reaching much the same end, is to contract for hedges, set out the plants, neglect the whole business after the first payment, and of course make a perfect botch of the hedge, and then sell out the contract to be completed either by some sleeping partner in the concern, or some unsophisticated green-horn, who can be induced to pay money for it, or at least to assume its responsibility, while the operator posts off to parts where he is not so well known. But it is not necessary to expose all the "tricks of the trade" that have already sprung up in this new business. Enough has been said, I trust, to put all the farmers of the West and South on their guard against the proper persons and their improper measures.

I am well aware of the delicacy of this subject. I know that the most honest and capable men are liable to fail, either from undertaking to superintend an amount of business which no man on earth can look after properly, or from unforeseen accidents to plants, or drought or bad seasons, or other causes. But it is not against these that I am cautioning the public. I am also aware that I shall be in all probability

censured if not publicly and anonymously misrepresented and abused for writing this article, but I cannot help it; all this will only show the more clearly that it was needed: for if there is no such system of fraud abroad as I have described, then no one will be harmed, for I have carefully abstained from all allusion to persons or places which should lead to fixing unjust odium on any man. It is my own honest belief that within the past five years, there has grown up in the West and South, a system of itinerant swindling of the nurserymen and farmers, especially the latter, unparalleled in any other branch of business—a system which operates though indirectly, still quite as injuriously, to all our honest and capable hedge makers as to the farmers themselves or to any other class, and when I read the flaunting and preposterous advertisements in some of our papers, promising what no man on earth ever did or ever can perform, I am really sometimes at a loss to know whether the writer is himself a knave or a fool, or only one of those enthusiastic and misguided men who make theories into facts much faster than they can make facts conform to their theories.

I am not conscious that in making these exposures, I am unduly influenced by any personal considerations. These men are not in my personal way at all, and never have been, at least since I learned personally to guard myself against them, which I admit I was rather slow in doing, for I have never been nor proposed to be a setter or grower of hedges for others, having more of that business to do on my own lands, every year than I can properly attend to. On the contrary, when I have plants for sale, they benefit me, for they cause an immense amount of plants to be put out in the West every year that never come to anything, and that tends to raise the general price and the total demand. But with our experience in this country, if we all strive to conduct the hedge business in the best possible manner, the inevitable mishaps will cause losses enough to the farmers without saddling them also with direct schemes of incompetency, imposition and fraud, and I am not willing even thus, to speculate in silence out of their losses, and I know this is true of those distinguished horticultural gentlemen who have already touched upon this delicate subject, and of all the regular nurserymen in this State with whom I have the honor to be personally acquainted. They may make mistakes in their business—if they are not omniscient they must do so, more or less—but I do not know one who wants anything more of the farmers than the *fair* and the *just* thing, and instead of being in any way accomplices in this matter, I believe they have exerted all their influence they could to prevent it.

I wish our farmers could be induced to write their individual experiences and losses in this regard, but they are so busy I suppose they never will, and I know no other way than for the editors of their journals to take the matter in hand, and duly caution the inexperienced and unwary.

Yours truly,

J. B. TURNER.

Jacksonville, Ill., March 10th.

[Written for the Valley Farmer.]

**WHAT CAUSES SMUT IN WHEAT.**

EDS. VALLEY FARMER:—What causes smut in wheat? is a question of great importance to the wheat grower, but one which has never been satisfactorily answered, at least so far as my information extends. It is not my intention in the present communication to attempt a solution of the "vexed question," but simply to state a fact in my own experience that may perchance give a slight clue to those who love to indulge in a *posteriori* reasoning. In the fall of 1854, my brother and I sowed a field containing 100 acres in wheat. The field is an oblong square, laid off east and west, and, with the exception of a small swell in one corner is almost a dead level. The soil is as uniform as is usual in a field of that size, and was originally a rich loam resting upon a dark red clay sub-soil, but which has since been worn considerably by heavy cultivation. The field was divided length wise by a turn row—I occupying the North and he the South side.

Both crops were put in precisely the same way, with the common May wheat from the same pen. The grain was sowed broadcast by the same seedsmen and plowed in with double plows followed by a brush. If there were any smut in the seed sown it was so slight as to attract no attention. Now what to me seemed unaccountable was that while my brother's crop escaped entirely, mine was almost ruined by the smut. And farther: upon my part of the field four acres of white wheat were sown and there was not a grain of smut to be found in it.

Now sir, here is a case presented in which soil, climate, season, tilth, seed—everything are the same, and yet one part of the ground produces smut while the other escapes. Can those who profess to see through a millstone as well where there is a hole as where there ain't, throw light upon the subject.

I forgot to say that the field had been cultivated in corn the same year in which the wheat was sown, and the stalks knocked down and plowed in.

LOGAN.

Logan Co., Ky.

We thank our correspondent "Logan" for the interesting facts he has communicated. The case certainly appears to be involved in a mystery that would require the powers of penetration equal to see through a mill-stone, at least with a "hole," in to solve.

The generally received opinion in regard to smut is, that it is a *fungus* that is communicated from *sporules* contained in, or on the seed sown, and that under certain favorable circumstances, chiefly hygrometric and atmospheric they vegetate more abundantly and cause the smutty grains, and as a remedy, *caustic* washes have been used with considerable success. But in a most excellent essay on the wheat plant by Professor Buckman, of the royal Agricultural College, of Eng., he seems to demonstrate by experiments, to which we referred in the March num-

ber of the Valley Farmer, page 72, that the disease results from imperfect seed and that the washes used have no other effect but to destroy these imperfect or malformed seed, and thus prevent the disease.

We shall be pleased to publish the views of any of our farming friends which are calculated to throw light upon the subject. EDS. V. F.

[Written for the Valley Farmer.]

**Hop Culture in Missouri.**

MESSES. EDITORS:—In the January number of the Valley Farmer I find an inquiry concerning the culture of hops in the State of Missouri. I can answer only as far as Franklin County is concerned. Hops have been raised in this county for several years with great success, but, of late, without any profit at all, so that our hop raisers have mostly plowed up their hop fields, and cut up the hop poles into stove wood. Likely your readers would wish to know the reason of this.

When Breweries were first established in St. Louis, some of our farmers brought in occasionally wild hops, which grow in many places abundantly, and which they sold very well. At the same time they were persuaded to raise some hops and fair prices were promised. A good number of industrious farmers undertook the business. They were well acquainted with hop raising before they settled in Missouri.

A few crops sold well, say from 30 to 40 cts. per pound. Western hops were praised by the brewers. They asserted they were of a better flavor and of more substance than Eastern hops; Hop raising then increased, and it appeared that it would become a regular business amongst all those farmers who owned but a 40 or 80 acre lot, because they could, by hop raising, realize more on a small patch, than by raising corn and small grain on all their tillable ground. They got presses and baled their crops and some put up regular dry houses in order to cure their crop, during damp weather.

When the business was in this manner well started, the tune changed in St. Louis. Notwithstanding the rapid increase of breweries and the large consumption and demand for this article, the prices fell; at least our farmers got but little, say from 12 to 20 cents a pound.—The brewers in town began to discover a great many faults in Western hops. They got to be the reverse of all they had been before, and this last fall some of my acquaintances got the enormous prices of five and eight cents a pound, and some bales are in commission in St. Louis and cannot be sold at all. Last year some farmers quit hop raising, but this year nearly all will drop it.

If the hop using gentlemen in St. Louis really preferred Eastern to Western hops, they are perfectly right in refusing what they cannot use. But if they thought to pay their own prices whenever they had hop raising started at home, they are badly mistaken. They are welcome to go east and buy hops at 5 cents a pound—as many as they please.

You, or some of your readers, may perhaps suppose that I am one of these ill-fated hop-raisers—but this is not the case. I assure you that I have never raised a single pound of hops in my life. I simply state what I know. Hops really grow well in this vicinity, and if this business had met with better encouragement there is no doubt that hop raising would have become a great deal more general than what it has—as some of my acquaintances have realized upwards of \$200 on a little more than one acre.

If your readers should still wish to hear some more about hop culture, I am very ready and willing to give all particulars.

I am most respectfully, yours, G. G.  
Franklin Co., Mo.

(Written for the Valley Farmer.)

### Remedy for Smut in Wheat.

**EDS. VALLEY FARMER—Gents:**—I have been a subscriber to your paper from its first publication but never a contributor. Permit me through your columns to give the experience of one of my neighbors in relation to the smut in wheat. The individual alluded to is Col. Abraham Hunter, a man well known and of the first respectability. For the last several years his crop has been greatly injured by smut, perhaps near one half. Last year he washed and dried his seed, then soaked in a solution of blue stone, (I do not remember the proportions, but can get them if required.) He sowed the wheat thus soaked, and lacked a few bushels of finishing the ground prepared, not having enough. He finished with the wheat washed, but not soaked in bluestone.

The result was, that there was not a vestige of smut among the wheat soaked in blue stone, and the other, though sowed at the same time, and of the same seed, and alongside in the same field was nearly all smut, and not worth cutting. You are at liberty to publish this for the benefit of the wheat growers if you think proper.

Very Respectfully, JOHN BARNES.  
Benton, Mo.

### IMPROVEMENT IN FARMING.

One of our friends in S. W. Missouri, in sending us a large list of subscribers, says:

We have many good farmers in this section, and where ever they read your paper, they improve in agriculture and rural economy. The practice heretofore was to remove the stable from the manure, and feed stock in a hollow on a creek, where the litter would wash away—plant as many acres as could half way be got in—then cultivate in the same manner. But, sir, whenever they read the Valley Farmer, they take to spreading the manure, and feed their stock upon the fields in the poorest places—sow grass seed, plow deeper and plant less, but cultivate better, and also begin to inquire for better stock, and I think if many of our farmers would throw away the political papers and subscribe for the Valley Farmer they would save money, and be greatly benefitted thereby. I will send you more subscribers before long. Please excuse these hasty lines.

Respectfully, yours, &c. T. G. N.  
Springfield, Mo., Jan. 21st, 1857.

## The Vegetable Garden.

### Calendar of Operations for April.

**VEGETABLE GARDEN.**—Order, regularity and neatness, go hand in hand with good cultivation; and nowhere is their appearance of more moment than in this department, whether in respect to the enjoyment to be derived in contemplating the various developments of the crops, or the beneficial influence it confers on their growth. The walks and paths should be kept clean, and all blanks in their edgings repaired. It will not pay one to grow weeds.

**Tomatoes, egg-plants, &c.,** should now be removed from the seed-beds, and carefully transplanted either into a frame, or some sheltered spot where they can be readily protected from cold and dry winds. Choose a rich vegetable soil, and plant a couple of inches asunder.—This encourages them to form numerous roots, and they will succeed better on final planting in the open ground. Prepare for planting Lima beans by inserting poles, digging the soil deep, and mixing a portion of well-rotted manure, or leaf mould, in the hills. There is nothing gained by planting this crop too early. The soil must be warm, and in condition to accelerate vegetation before planting, to insure a speedy and vigorous growth. I have always seen the earliest and best crops from those that have not been planted until these conditions could be secured.

**Peas** should be sown every two or three weeks to keep up a regular supply. Let the ground be deeply worked for future sowings, otherwise they may not be profitable should dry weather prevail.

**Asparagus** should now be uncovered, and, if growing in rows, the soil should be forked up between them. In cutting it for use, it is well to bear in mind, that it is superfluous to cut below the surface, the white portion not being eatable. Seed may yet be sown for young plantations. See to the clearing of this crop, and give an early check to the growth of weeds.

**Chamomile, sage, wormwood, tansy, and lavender,** may have their roots divided, or increased by slips where a stock is required.

**HARDY FRUIT.**—Pears grafted on quince, require deep, rich soil, to derive full benefit from this method of culture. Many failures have occurred and much disappointment has been occasioned by those who have planted these without knowing what they were about. Of course, all such failures are attributed to the trees, and the system of grafting them; few people care about taking blame to themselves, if they can by any means shift the responsibility.

In planting, surround the tree with a peck or so of leaf or wood mould; this starts them vigorously. Cover the whole of the quince and about an inch of the pear stem, with soil. The quince roots freely from any part of its surface; therefore, deep planting in this case is not injurious, and it prevents the depredations of the borer.—*Horticulturist.*

## Stock Raising Department.

### Ruta Baga, Sugar Beets and Mangelwurtzel for Stock.

A correspondent residing in central or southern Kentucky states that he is a young farmer and has for three years failed in his attempt to grow the Rutabaga turnip and thinks the seed he has planted is not of the right kind, or his management has been imperfect, and asks for light on the subject.

We presume our enquirer has taken his lessons from English works, or from Northern and Eastern agricultural papers, which so far as they relate to this crop are not applicable to our climate.

The turnip, in its different varieties, constitutes an important crop in British agriculture. Indeed all the available land in Great Britain could not possibly sustain its population without it. The climate is cool and damp which are essential elements for the production of this crop, and in no part of the world are they grown more abundantly and in greater perfection than in that country. One acre in turnips will probably feed more cattle than ten acres in pasture and hence they are chiefly depended on as food for cattle and sheep.

In the cooler portions of the United States, large crops of turnips are frequently grown, and where Indian corn cannot be depended on as a sure crop, they are of great service in wintering stock.

The climate of the South Western States is too hot and dry to produce any of the roots in perfection. If planted early in the Spring the heat of summer arrives before they have time to bottom, and if the planting is deferred until summer or fall the hot weather extends so near to winter that time enough of the proper temperature is not left to mature them. This is the case in some degree with our potatoes, and hence it is important to plant none but the earliest varieties, so that they may mature before the extreme summer weather arrives.

We have for many years cultivated an acre or so of the Ruta Baga turnip, but never to any profit, and when the dry weather has continued late in the season we have often failed entirely. None but the Flat Dutch and similar early varieties of the turnip can be depended on with us to produce a crop, and although they are not as solid and nutritious as the Rutabaga and Swedish varieties, yet with good management they can be frequently grown to profit and are found

extremely grateful to cattle and sheep in winter.

### SUGAR BEETS AND MANGELWURTZEL.

The large varieties of the beet can be grown to much better advantage with us than any of the root crops. But where Indian corn can be grown in such perfection as with us, the beet cannot be depended on as a profitable crop, yet we would advise every farmer to cultivate at least half an acre of them, for they are no less luxury to milch cows, than the rich yellow butter which they yield in winter, is to the farmer's family.

*Time of Planting.*—The sugar beet and mangelwurtzel should be planted by the middle of April, in a deep, rich soil, thoroughly plowed and harrowed. The seeds should be soaked in warm water for forty-eight hours, when the water should be drained off and the seeds covered with a cloth and put in a warm place and be stirred every day until they begin to sprout, when they should be immediately planted.—Should the seed become in anyway dry before they are planted, they should be slightly moistened. Our method of planting the seed is with a drill-barrow, first rolling the seed in ashes or plaster to cause them to drop freely. The drills should be 28 or 30 inches apart so as to allow cultivation with the horse. If the seeds are dropped by hand they should be placed so as to have the plants stand about ten inches apart in the rows. When planted with a drill four pounds of seed will be required to plant an acre, when planted by hand less than half that quantity is sufficient.

[Written for the Valley Farmer.]

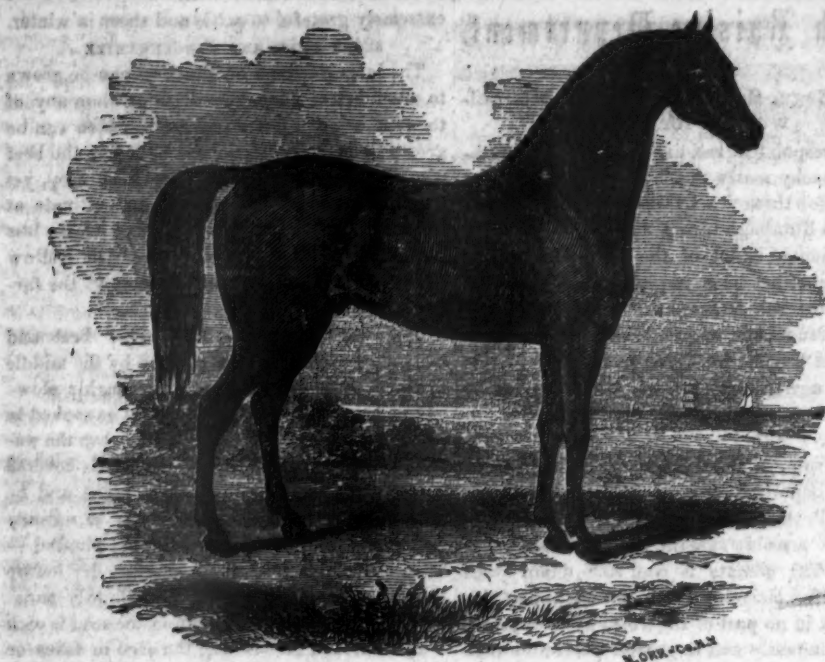
### SHEEP.

EDS. VALLEY FARMER:—I have seen the enquiry of your "Jefferson County subscriber," and thought I would send you a few samples of Merino wool from my father's flock, simply to satisfy you and him, that *fine wool* is, and can be raised in the West. We have been raising sheep many years and have tried all varieties generally known in the country. Of the *long wools* we prefer the Oxfordshire on account of the wool and meat, with their other good quiet qualities, though in meat no finer than South-down—but more of it.

The Merino "all in all," we think more profitable than any other breed. Wool, especially from the French merinoes, which yield the heaviest fleeces known, is more abundant as a breed and then so much more valuable per pound.

You say they are "indifferent for mutton," to which I beg leave to *protest* with all my might—having eaten of nearly every variety found in *American markets*. I know none superior in flavor or touch.

Yours for the truth. MILTON RUSTIC.



THE MORGAN HORSE "BLACK HAWK"

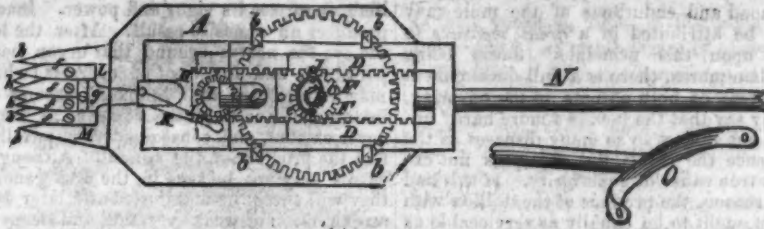
Was foaled in 1833, the property of Wingate Twombly, of Greenland (formerly of Durham,) N. H. Sired by Sherman, g. sire, Justin Morgan. His dam was raised in New Brunswick, and is described as a half-blood English mare, a very fine animal, black, and a fast trotter.—When four years old, Black Hawk was purchased by Benj. Thurston, of Lowell, Mass., for a family horse, and kept for that purpose until 1844, when he was purchased by David Hill, Esq., of Bridport, Vermont, by whom he is now owned.

Celebrated horses, like great men, must have their enemies, and this horse has had his. A few years since a rumor was circulated that he was not sired by Sherman, but by a French horse called Paddy. The only foundation for such a report seems to have been the resemblance between the two horses in color, both being black. Mr. Hill might well have taken no notice of this rumor, as he had produced the affidavit of the owner of Sherman, in 1832, testifying that Sherman was coupled with the dam of Black Hawk that season, and the following season he received payment for the same. The testimony of Mr. Bellows being unimpeached, the rumor might seem amply refuted and silenced, but Mr. Hill did not choose to rely solely on this affidavit. He obtained affidavits or letters from the breeder and others who had every opportunity of knowing the facts, fully and amply sustaining the affidavit of Mr. Bellows.—These papers were published and have pretty effectually settled the question. The parties who first circulated the above rumor, could have had little or no acquaintance with him or his

stock, for with the exception of color, he bears a strong resemblance in most particulars to the family of which he is a member. In size, compactness, style of action, great muscular development, temperament and endurance, he exhibits their distinguishing traits in a high degree. His stock, though generally larger being from larger dams, exhibits much the same characteristics, and their color when not black, is almost without exception, bay or chesnut, the latter color being quite common. Many of his colts have the same marks in the face and upon the feet that belong to Sherman and his dam. We never saw a white, a gray, or a cream colored horse from him.

Black Hawk is a little under fifteen hands high, and weighs about ten hundred pounds. His compact, symmetrical, and muscular form, and nervous elastic style of action, give unmistakable evidence of the speed and endurance he has shown upon the turf and road; and although now twenty three years old, his eye has lost none of its brightness, his health is still excellent and his movements still graceful and energetic. One of the chief excellencies of Black Hawk, and one which he possesses to a remarkable degree, is the uniformity with which he stamps upon his offspring his own distinguishing characteristics. Few colts were sired by him previous to 1844, when he became the property of David Hill, and since that time he has been constantly kept at that gentleman's stable, in Bridport, Vt.

As we noticed in a late number this celebrated horse is now dead.



### SHEEP SHEARING MACHINE.

Of all the labor saving contrivances, if we had not seen it in operation, we would have regarded one for sheep shearing the most difficult to make, and yet we know of none more simple in its construction or more perfect in its operation than the one figured above. Having seen it in operation at the New York State fair, we wrote to the inventor, for a cut in order that we might give our readers some idea of its construction and labor-saving advantages.

It resembles in appearance and operation a miniature mowing machine. It is but about 12 inches long and hardly half as many inches wide and about 1 1-2 inches thick. United with the machine there is a bow which is secured to the arm of the operator by a strap, the points or blades of the machine is then placed on the body of the sheep to be shorn; then by the simple motion of a handle back and forth and moving the machine over the body of the sheep, the wool is rapidly cut, almost with the same close uniformity that is marked in shearing broad-cloth in the factory.

We have the statement from the best authority that one man can shear 100 sheep in a day, in the most perfect manner, and many more than this, where the operator has nothing else to do but to work the machine.

Besides the perfection and rapidity with which the work of shearing can be done, the machine possesses several other important advantages. Although it cuts close, saving in wool over the common method of shearing more than sufficient to pay the cost of the labor of shearing, the blades are so arranged that it is impossible to cut the sheep, so that it proves an instrument of humanity as well as economy.

We saw passing our streets a few days since a flock of one or two hundred sheep, on their way to the New Orleans market. As usual the wool had just been shorn. The work besides being roughly done, there was hardly a sheep in the flock whose flesh had not been cut in a number of places.

These machines are said to be durable while the cost is moderate.

Written for the Valley Farmer.

### THE HORSE.

As the present high price of horses will induce all who can to raise and bring them into market, it is but reasonable to suppose that many mares will be used for breeding, whose progeny will prove of very little value. In the present instance I propose to consider something of the results to be expected from a judicious course of breeding, and vice versa. In the selection of a stallion to breed to, inasmuch as nearly every one is within reach of a good many, most persons are called upon to exercise some judgment in making a choice, and in order that the choice may prove a wise one, see to it that you consider well the object in view, viz: What kind of a colt do you wish to produce? Consider the qualities of your mare and also the horse, and after all do not breed to the price of the insurance instead of breeding to the horse. A dollar or two now may make a difference of fifty or more a year or two hence. In order to a perfect development in the foal, the mare should be relatively larger than the horse. A large, loose made mare, from a smaller but muscular and ambitious horse will rarely fail in producing a valuable colt. The mare being large and roomy there is ample space for developing in the foetus the full powers of the horse in an eminent degree, giving it remarkable strength, activity and constitution. The correctness of this principle will be readily seen in the effects produced by this course of breeding. Doubtless every reader can point to a number of small horses, (Canadians and others,) which have sustained a high reputation amongst stock raisers throughout their whole lives. The justly famed Morgans, and the advantages to be derived by crossing them upon common stock afford a striking illustration of the truth of this remark. The Mustangs of the western plains, as well as all wild horses are remarkable for their hardihood and bottom. When it is remembered that the medium and smaller sized horses are always masters in a herd and consequently the race being perpetuated by them, another example is afforded, carrying out the truth of this observation. By crossing the large English mares with the (smaller sized) horses of Arabia and the Barbary States, some of the fleetest horses in the world have been produced. The superi-

or hardihood and endurance of the mule may certainly be attributed in a *great measure* to breeding upon this principle. Jacks being smaller than mares, there is a full development of the powers of both parents in the offspring. Some may say that the jack is a more hardy animal and not subject to so many diseases as the horse, hence the result, but this does not explain the true cause of superiority. If this had been the reason, the produce of the stallion with the jennet ought to be equally as serviceable as the mule, but experience has proved that the offspring which is called a *Hinny* is a worthless animal. Colts produced by crossing small mares with large horses are frequently tall and ill-shaped, awkward and sluggish, also deficient in constitution. Of course there are exceptions but this is the *natural* tendency. From this fact the improvement of our stock by importing very large horses, has not been attended with such marked results, as has been attained by a different course of breeding. An error has been committed in importing large horses instead of mares, and although a good many valuable horses are to be found among the colts of imported draught horses, there are many others that will not compare favorably with the common breeds of the country. A large breed cannot be kept perfect and condensed by raising from females of smaller size. Either the form, the spirit, or the constitution must be sacrificed, perhaps all. But you are ready to ask, How are we to keep up the size of our horses and practice upon this principle? Many small horses breed large and their colts will, in nearly all cases be large enough. If however, you have a small mare, I would not advise breeding to a still smaller horse, but after breeding to a larger one, if the colt should prove deficient, correct again by reversing. Perhaps enough has been said upon this subject to lead you to think and observe. If so my object has been attained. Lessons of experience are always readily fixed upon the mind.

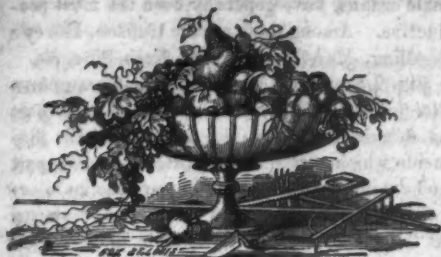
Some difference of opinion is entertained as to which exerts the greatest influence upon the offspring, the male or the female. I think, however, that owing to the peculiar treatment and habits of the stallion, a deeper impress is generally made upon the side of the sire than of the dam. Taking this for granted, and also bearing in mind that "like produces like," it is a matter of great importance that the stallion especially be free from defects and blemishes. Spavin, curb, predisposition to splints, windgalls and all such things are hereditary. All these things are formed easily enough, without breeding to horses which have them. I would, for this reason always discourage the idea of keeping a horse, unless entirely free from defects. If a horse's legs fail he is useless, and if he inherits spavin or any such diseases, there is little prospect of his ever being permanently cured. Some suppose that if a horse has an eye knocked out, or is otherwise rendered blind by accident or ill-usage, his usefulness as a breeder will not be affected but this idea is erroneous. A healthy action and exercise of any member, muscle or

limb, increases its vigor and power. Inactivity produces an opposite result. After the loss of the eye the nerves around that organ becomes paralyzed, and for want of exercise (whatever may have caused the blindness) become to all intents and purposes the same as if they had never existed, and consequently materially affect the progeny of the animal. Although the effects may not be seen in the first generation they will surely be manifested at a later date by an exhibition of weak eyes, dull and sleepy looking eyes, very small and bad colored eyes, and finally, total blindness. Stallions are perhaps more liable to go blind than any other horses. If used as work horses they are very apt to pull too hard. Many horses have been rendered blind from this cause. If saddle horses, by undue exertion in training they are sometimes strained and the eyes lost. If over-taxed during the season the eyes often fail; and again a horse will often be seen looking through some crack in the stable with his eyes fixed intently upon some object for many minutes in succession, thereby straining the eye and resulting finally in loss of sight. If any of these causes or even accidents may have rendered a horse blind rest assured that the effect will be sooner or later manifested in his stock. Old Copperbottom, during his lifetime, was paced a distance of 90 miles, which he accomplished in less than 9 hours, but this resulted in the loss of his eyes. We find now that his descendants in this State. (Ky.) as well as many others are weak-eyed. I know a grandson of his, whose eyes were to outward appearances as good as any I ever saw now entirely blind, and his eyes failing without any apparent cause. It is also a well known fact that the Copperbottom's are addicted to blundering. May not this be attributed in part to some defect in the formation and structure of the eye? If so this is an important item for consideration. In conclusion upon the subject of defects let me say, if you are raising stock, breed to an animal in all respects free from blemishes, if you are buying stock, purchase such as are free from defects. These things are often produced by causes which you cannot control, and when selling time comes, (especially if the market is dull) you must account for every puff, limp, or hair that is out of place. H.

#### Ewes—Causes of Abortion.

G. T. G., BOONE COUNTY, Ky.—The most usual causes of abortion in ewes is excessive fright or exertion, but it is sometimes caused by severe exposure and poor feed. But in the cases referred to by our correspondant, we have no doubt, was the result, as he suggests, of alarm and fatigue, caused by dogs.

The number of sheep that are killed by dogs in this State, have been estimated at ten thousand, annually. But for this draw back Kentucky possesses greater advantages for sheep husbandry, than any other State in the Union. But many of our wool-growers have abandoned the business on this account. Some law adequate to protect this important interest should be adopted.



## Horticultural Department.

### CULTURE OF THE STRAWBERRY.

TO THE EDITORS OF THE VALLEY FARMER—  
Gentlemen:—I have read with much satisfaction in the several numbers of your valuable publication, that I have received since I became a subscriber, your articles on the culture of the various kinds of fruit. Will you give some directions for the cultivation of the strawberry, and a list of the best kinds to plant. I have heard it said that there are two kinds—male and female, and that it is necessary to plant some of both to make them bear. If this is so, will you please describe how the kinds may be known, and much oblige a NEW BEGINNER.

Springfield, Ky., March 11th, 1857.

The culture and characteristics of the strawberry have been so often and so fully presented to the readers of horticultural works, that it has become quite a thread bare subject, and still what is most strange, that after so much has been said of the most delicious of all fruits, so little attention is paid to its culture, when it can be grown so abundantly and so easily, requiring no other care than that of the females or minor members of the family. We venture there is not one garden in a thousand throughout the country, in which can be found a properly managed, well-cultivated strawberry bed. We know from practical demonstration that as many strawberries, by measure may be grown upon a rod of ground as of potatoes, and with comparatively little more labor.

In the April number of the Valley Farmer for 1856, we gave most ample directions for the cultivation of this fruit, with illustrations of the different blossoms, but as our enquirer was not then numbered with our readers, and hoping there are many "New Beginners," we will endeavor to comply with his request.

It is important that all cultivators of the soil whether upon the farm of a thousand acres, or a garden of a rod of ground should possess some knowledge of the principles and practice of Botany. There is no study more important

in their vocation, while at the same time it is the source of no small degree of pleasure.

The lack of a correct knowledge of the sexuality of plants among the cultivators of the country, some times leads to serious consequences in the adulteration of different products, particularly of garden vegetables, and it should be forever remembered that no two plants of different varieties belonging to the same family should ever be allowed to go to seed in the neighborhood of each other, for it is in this way that they become "mixed" and new and generally inferior sorts are produced.

The great object of nature appears to be the propagation of every species of both, animal and vegetable life. Nor is the mysterious process of reproduction widely different in the animal and vegetable kingdoms.

The true sexual system of plants was not fully understood and established, until the days of Linneus, although at an earlier period it is stated by Theophrastus and Pliny that the country people who were engaged in the culture of Dates—hung up flowering branches of one kind among the branches of the other—the seed bearing form, and thus caused the development of seeds and fruit. Kampfer also relates that in an inroad of Turks into Bossora, the inhabitants accomplished the expulsion of the enemy, solely by hastily cutting down all the Palms bearing one kind of blossoms, so that the others remained sterile, whereby the enemy was deprived of his only source of food.

In studying the structure and physiology of plants, they present a countless variety, with almost an infinite number of peculiar forms; by which the whole great vegetable family, under what is termed SYSTEMATIC BOTANY have been classified so as to exhibit their relationships or points of resemblance, and to designate them by proper names, and distinguish them by clear and precise descriptions; so that the name and place in the system, the known properties, and the whole history of any given plant may be readily and surely ascertained.—Under this system plants are arranged by the botanists into KINGDOMS, CLASSES, ORDERS or FAMILIES, GENERA and SPECIES, and these again are reduced to several subdivisions.

In Botanical science, there are four classes or descriptions of floral organic (*sexual*) development: first, the *perfect* or *hermaphrodite*, with the reproductive organs in the same flower, like the apple, peach, pear, cherry and many others. Second, the *imperfect* or those in which the reproductive organs occupy different

flowers, though upon the same plant, as in the cucumber, melon, squash, Indian corn, oak, beech, hickory, hazel, &c. These flowers are termed *monocious*. Third, when these organs are produced on different individual plants, as the hemp, spinach, hop, willow, poplar, osage orange, &c., they are called *diocious*. Fourth, when the same plant produces blossoms possessing all these peculiarities, viz: perfect flowers, or those in which the male and female organs are both found, and others in which the male organs are produced, and again, those in which the female organs alone are present—such as the palms and many species of maples, &c. Plants with such flowers are said to be *polygamous*.

Among the different varieties of the strawberry, now generally cultivated, the remarkable anomaly of all four of these peculiar characteristics may be observed, at least so far as the means of fruit bearing and reproduction are concerned. This has led to the endless and sometimes bitter controversies with which horticultural readers have for many years been treated. The truth is, each writer has generally been right and each wrong; each one has treated the subject, as a matter of fact, according to his limited observation. But the three first classes we have named, may generally be found in every garden where half a dozen varieties of the strawberry are cultivated. Of the fourth class we have never met with but one variety presenting these characteristics.

For our present purpose it is not important that we go into a full botanical analysis of the strawberry blossom, but by way of illustration shall only refer to the reproductive organs, as illustrated in the following cuts:



Fig. 1 represents the *female* or *pistillate* flower, and the little yellow tuft, *a* in the centre which is composed of a parcel of short minute fibres called *pistils* are the female organs; each fibre extends to an embryo seed, and unless the pollen or impregnating powder, produced in the blossoms of the opposite character comes in contact with each of these small fibres, that part of the fruit will fail to be developed. This is the reason why we sometimes see one-sided strawberries, or those with hard green spots on them not filled out. Varieties with this kind of blossom, grown in the vicinity of those having the

male organs, have generally been the most productive. Among these are the Hudson, Hovey's Seedling, McAvoy's Superior, Neck Pine, &c.

Fig. 2 represents the perfect or *hermaphrodite* flower. The centre, *a*, is the female part as described in Fig. 1., and the little filaments which surround the *pistils*, or female part and extend outwards as at *b*, are the male organs of the blossom, and are called *stamens*. At the end of each of these little filaments are little balls called *anthers*. These anthers are filled with minute powder called *pollen*. At the period of perfection of the flower, these anthers burst, and the pollen is scattered by the winds, or carried on the legs of flies or other insects and comes in contact with the pistils, and impregnation or fertilization is the result. In the *diocious* and *polygamous* classes of plants it seems that nature requires the aid of bees and other insects to consummate this mysterious and important operation, for this purpose we may infer that she has imparted to the flowers the delicate nectar to attract the insect as its chief food, as well as to render the excess of *pollen* in the economy of the industrious bee indispensable.

Fig. 2 will also convey the idea of a purely male or *staminate* blossom, when the male organs so far predominate over the female organs that they prove entirely abortive. But the *hermaphrodite* or *perfect* varieties answer all the purposes for impregnating the pistillate varieties, while some of them bear excellent crops themselves. Among these are the *Large Early Scarlet*, *Washington of Iowa*, *Longworth's Prolific*, *Peabody's Hautbois*, &c.

We do not know that we can materially improve our list furnished last year for general cultivation. The four varieties named above are the best which have perfect blossoms and will produce good crops when planted alone, and should be selected by persons who are not likely to pay the proper attention required for pistillate sorts.

During the fruiting season last year we visited many gardens in company with the fruit growing committee of the Cincinnati Horticultural Society, for the purpose of ascertaining the comparative value of the different kinds grown in that vicinity, but owing to the drouth which set in about that time, no very definite conclusions were arrived at, except that *Longworth's Prolific*, (bearing perfect flowers,) was considered one of the very best and most productive varieties now cultivated—all things considered.

Among the best pistillate kinds we will name the following:

**Neck Pine.**—A very hardy plant on any soil; extremely productive, but requires care in thinning the plants. Fruit, high flavored, but soft and consequently not suited for market, but one of the best kinds for home consumption.

**Hovey's Seedling**, on new land, or rather heavy loam, has for some years produced extraordinary crops of very large fruit.

**McAvoy's Superior**, is one of the best new pistillate seedlings; it is productive; fruit, large, good for market or home use.

**Hudson.**—The old Cincinnati market sort; it is firm, of good color and bears carriage well, though hardly equal in all points to some others.

For Northern and Eastern sections of the country other varieties are highly recommended but they have not been generally introduced in the West.

The strawberry will thrive on almost any soil but a rather heavy loam or clay subsoil, if well trenched suits most varieties best. The ground should be well prepared, and for garden culture it is most convenient if laid off in beds about four feet wide. Two rows of plants may be set fifteen inches apart through the middle. The plants should be kept free from weeds and well cultivated through the season to allow them to extend over the beds, but in the following spring they should be thinned to three or four inches apart.

To grow large fruit, the beds may be made three feet wide, and two rows of plants set in each bed and be well cultivated, cutting off all the runners as they appear. This is the English method, and though it produces fruit in greater perfection, but in less quantity, it requires more labor, for when the vines are kept clean and allowed to cover the ground they keep down the weeds until they are thinned in the spring.

When the pistillate varieties are depended on for the main supply of fruit, it is necessary to set about one plant in *twenty* of the staminate or male kinds. We however prefer to keep them entirely distinct, never allowing the two kinds to run over the same bed, but plant every *third* bed with some good variety, bearing male or perfect blossoms. These will serve abundantly to impregnate the other varieties.

From early spring to the time of flowering is the best time to set the plants.

[For the Valley Farmer.]

## A Premium Essay, on the Cultivation of the Grape in Missouri.

PREPARED FOR THE ST. LOUIS AGRICULTURAL AND MECHANICAL ASSOCIATION.

BY GEO. HUSMAN, HERMAN, MO.

### PREFACE.

As I have been engaged in the culture of the grape ever since 1847, and have carefully noted all appearances in this comparatively new branch of agriculture, with the earnest desire to try everything, and carefully sift the really useful from the unsuccessful experiment, I thought the following little treatise might be of some use to my fellow vintners. Our brother vine growers in Ohio have already an excellent guide for the beginning vintner, in Mr. Buchanan's treatise on Grape Culture. But although there is much in it, which can also be applied to grape culture here, I think climate and soil differ so much that a different treatment is, in some respects, absolutely necessary. The vine grows so luxuriantly here, that, if we would reduce it to one spur, and one bearing cane of six or eight eyes in pruning, we would soon not know how to check its growth in summer, it would overrun the bounds prescribed to it, more dampness in the vineyard would be the consequence, and of course, more mildew and rot. I have a few rows in my vineyard, which I have pruned to 30 eyes nearly every year, and yet they are too luxuriant. Of course no one can give a fixed rule how to prune each vine, as that differs according to strength; here the judgment of the vintner himself must advise him. As to summer pruning, I adopted Mr. Buchanan's mode of shortening the bearing shoot to two or three eyes beyond the first bunch of grapes, and afterwards taking away the suckers entirely; but after many experiments, I found the manner described by me much superior for our climate, and it is now followed by all our most successful vine growers. The merit of having tried it first, however, belongs to Mr. Paschall, and after four years of successful trial, we may confidently recommend it to all who may wish to cultivate the vine in our State.

I have been as concise as possible, intending merely to give an outline of the necessary operations, thinking as I do, that going into many statistics, and speculating as to the probable produce per acre, can be at the best, but guess work, as long as we have so uncertain a variety to work upon as the Catawba. With Norton's Virginia Seedling and Lenoir it might indeed, be different, as they are not subject to so many diseases. The yield of Norton's Seedling per acre of a 1000 bearing vines may safely be put down at 250 gallons, and the Lenoir may be put down at 350 to 400 gallons. These varieties deserve to be cultivated extensively. The Catawba no doubt yields most in favorable seasons and examples have been seen of a single vine, four years old, producing 6 and 7 gallons, but they had been taxed beyond their strength, and were ruined at once. It is however, so uncertain that a single day of unfavorable weather, may take half of the crop.

I have now said my say! It remains for the

public to decide whether well or ill. Being a German by birth, I may not have expressed myself as fluently in the English language, as may be required in a treatise of this kind, but an earnest desire to give none but useful and reliable information has governed me throughout, and if I have added one iota to the prosperity of our noble pursuit, if my humble effort serves but to help to raise three or four prosperous vineyards on the banks of our noble river, I am richly compensated for my labor as it has been labor of love for the subject, not of toil.

#### THE VINEYARD—POSITION AND SOIL.

The selection of a suitable situation is very important. The best situations are generally our hill sides, along our largest streams, with an eastern, south-east, or southern aspect. The hills adjoining creek or branch bottoms should be avoided, as they are peculiarly subject to frost, as well in the winter as in the spring.—The more free and elaborate a situation is the better it will be, as it allows a free circulation of air, one of the best preventives against mildew and rot.

The soil best suited for the vine, is a dry, calcareous loam, with a porous subsoil. Any soil retentive of moisture, for example, stiff, wet clay, or wet spongy land, should be avoided, as the grapes are much more subject to mildew and rot on such soils.

#### PREPARATION OF THE GROUND.

The ground should be trenched with the spade to the depth of 2 to 2 1/2 feet, the deeper the better, and the top soil turned under. The best time is in Autumn or early winter, as the soil will then be mellowed by the frost. One of our most successful cultivators, Mr. Paschall, throws in the trenching, a layer of corn stalks, brush, cut with the leaves on in summer, etc., underneath. This serves as a partial subsoil draining, and also as a manure, and is an excellent plan. Wet spots may be drained by gutters, filled with loose stones, covered with flat ones and then filled up with earth. Surface drainage may be done by small ditches in every sixth or eighth row, running parallel with the hill side, and leading into a main ditch or drain running down the hill at the end or middle of the vineyard. Steep declivities must be terraced or benched; as this is, however, very expensive, they ought to be avoided.

#### PLANTING.

Opinions differ very much among vine growers, as to the proper distance in planting, some planting 4 by 4, others 5 by 5, 5 by 6, etc. I consider 6 by 5 feet the best, as the free circulation of air between the vines prevents the mildew and rot, at least partially. Due allowance however, should always be made to quality of soil, as on rich soil, the vine will grow more luxuriously and therefore require a wider distance than on poor soil. Much of the quality of the fruit also depends on this, as a free admission of sun and air will of course, materially improve the fruit, and also give the roots sufficient space to spread.

Much diversity of opinion exists also as to planting with cuttings or rooted vines. My experience is decidedly in favor of the latter for

the following reasons. 1st. A vine ought to have its principal roots as far below the surface as possible. A cutting will often strike nearly all its roots near the surface and will then never make a good healthy vine; in planting rooted vines, its roots can be placed where they ought to be. 2dly. All cuttings will never grow, even if two are planted in the same place the vineyard will need much replanting, and the second planting will never make as good vines, as the first. Where no vines can be had I would advise to procure cuttings, plant them in moist, well pulverized ground, in rows three feet apart and three to five inches apart in the rows, in a slanting position, one foot deep, with the upper eye just above the ground, and keep them free of weeds during the summer; if the season is favorable they will make fine strong plants for spring planting. The cuttings should be made of sound, well ripened young wood, if a small part of the old wood is left attached, so much the better, and at least contain four eyes or joints, cut them off close below the lower joint and about an inch above the upper. They should be kept in a cool, moist cellar, or buried in the ground until planted.

In planting in the vineyard lay the ground off with a line and put down a stick 16 inches long where each vine is to grow. Dig a hole, 18 inches deep, in a slanting direction, lay your vine in and take care to spread the roots properly. Then throw in a shovelfull of rich, light mould about the roots and fill up with well pulverized earth. Of course the planting should be done when the ground is dry and mellow.

#### TREATMENT OF THE YOUNG VINE.

The first summer after planting, nothing is necessary but to keep the vines free from weeds, with the hoe or plough. Should the vines grow very strong, they may be tied to the sticks which were used to mark off the ground, and only one shoot be allowed to grow.

The next fall and winter stakes should be provided. Here again, opinions differ, some simply using stakes, others preferring trellis. My experience is in favor of a light trellis, made in the following manner. Take cedar posts, where they can be had, if not, mulberry, walnut, locust or whiteoak of about three inches diameter, and eleven feet long. Point these on one end, and in setting, make holes with a crow bar, two feet deep, in the space between the vines. To these stakes, nail laths, the first about two feet from the ground, the others 18 inches apart. They can be made of black oak, one inch broad, by half inch thick. Provided the stakes are of durable timber, such a trellis will last ten years and longer, need no resetting, as the small stakes do, every spring, and are much more convenient to tie the vines, and train the young shoots to them.

The next spring, cut the young vine back to one eye or bud, and also cut off all upper roots to one or two joints below the surface. Should the vine be very strong, two shoots may be left to grow. Keep them neatly tied to the trellis with straw or bark, and pinch off all suckers and lateral to within an inch from the vine. The vineyard must be kept clean of weeds, using

the plough between the rows, and for the first dressing, the two pronged German hoe around the vines, and for all after dressing, a common field hoe, scraping the weeds off as lightly as possible. In the fall; unfasten the vines, as they are not so liable to be injured by frost, as when kept tied to the trellis.

The second spring after planting, cut the vine back to 3 eyes or buds, or, if the vines are very strong, and have more than one shoot, cut one of them back to two or three eyes, and the other to six or eight, for bearing. However the wish to have a crop should not lead to taxing the vines beyond their strength, as it will injure them forever afterwards. Treat them the same way as the summer before, with the exception of the bearing canes, which must be tied to the trellis in the spring, and all the shoots showing fruit, should be pinched back, before the blossom, to just above the last bunch of grapes, and the suckers, which afterwards appear, to one joint or leaf.

After the third year, the vine may be considered as fairly established. In pruning, the third Spring after planting, two bearing canes may be left, if the vine is strong enough, if not, leave but one, with eight or ten eyes. A good and healthy vine can be pruned to two bearing canes with eight or twelve buds each according to strength. Leave no more young shoots than are necessary to produce two canes for bearing wood for next year, and two spurs of two or three buds each, to produce young wood. All superfluous growth should be checked, as it will materially injure and weaken the grapes. The principal consideration in our climate must be to force the grapes as much as possible, by pinching off the fruit bearing shoots as soon as possible just above the last bunch of grapes and afterwards pinching off all suckers to one leaf, until the latter end of July, when all may be left to grow unchecked, to produce young leaves to shade the fruit when ripening.

Where a vine has failed to grow, it can be replaced by a layer from a neighboring vine, made in the following manner: Dig a trench from the vine to the empty place, from a foot to eighteen inches deep, and bend into it one of the canes of the vine, pruned to the proper length, and let it come one or two inches above the ground at the place where the vine is to be, and fill up again with good light soil. The next spring it may be cut about half through, close to the parent vine, and the second spring it may be wholly cut off. They will strike root freely and grow rapidly, but as they take much of their nourishment from the parent vine, it must be pruned much shorter, say to 12 or 15 buds. This is a much better way than replanting with young vines.

The summer culture of the ground is precisely as the second and third year. It is generally taken as a rule that during wet seasons the ground should be kept clean and smooth, stirring but little, during dry seasons, the ground should be drawn up to the vines and well stirred. Should a vineyard show a decrease of vigor, it can be manured by digging a small trench just above the vines, laying in manure and cov-

ering up again with the plough or spade. Vegetable manure I should consider best adapted, but good decomposed stable yard manure will also do. Ashes are no doubt very beneficial to the vines.

In pruning, much difference of opinion prevails as to the proper time. I should consider fall pruning best, as the vines do not suffer from flow of sap, but any time from beginning of January to March will also do.

[Concluded in next Number.]

### Maps of Orchards---Labels for Fruit Trees.

In planting an orchard it is very important to have a sketch of it on paper, so as to indicate the names of the varieties of fruit in every row. This should be done when the trees are planted and the nurseryman's label is new and legible. Much of the confusion of nomenclature of fruits is caused by the neglect of this precaution. The labor required to draw the plat of an orchard of one or two hundred trees would hardly exceed an hour's time.

Trees, when planted promiscuously in the yard or garden, should be permanently labeled, so that when they come into bearing there will be no difficulty in giving the name of every variety of fruit.

Many trees, when they come into bearing, particularly if they happen to occupy a favorable location, frequently produce fruit of excellent quality, which attracts the attention of the amateur at the horticultural exhibition or in the market, but the grower cannot give the name, and a local one is often adopted, which has caused much confusion among fruit growers. The various fruits which have been erroneously named should be corrected as far as possible. A little care at the time of planting will easily remedy these errors in future.

What is called by the trade "Metallic wire," mostly composed of lead, is made for suspending labels to trees, tying up grape vines, &c. This wire is extremely flexible and very convenient for the purpose. It may be made in a long loop and slightly twisted around a limb and as the tree grows it is so flexible that it yields to the growth without cutting into the bark, as is the case with iron and copper wire.

The method usually practiced by French nurserymen, in labeling trees, is to write or stamp the name or number on pieces of sheet lead or zinc, cut in strips four inches long and half or three quarters of an inch wide and wind them around the branches.

*Ink for Labels.*—An indelible ink for writing on zinc, can be made as follows: Take verdi-

gris and salammoniack, each two drachms, lamp-black one drachm, water four ounces; mix well in a mortar, add the water gradually. It must be kept in a vial with a ground glass stopper. Before using, shake the vial well, and write on the zinc with a quill pen. This will remain permanent for years, subject to any exposure of the weather.

**WATERMELONS.**—Our friend, Chas. Lewis, of St. Louis Co. Mo., has the reputation of growing the largest watermelons in this vicinity.

His method is as follows: Early in Spring he plows the ground very deep. The hills are then made twelve feet apart, and are level with the surrounding earth. But three plants are allowed to grow in each hill and they are situated in the form of a triangle. The ground between the hills is well cultivated and kept in a mellow condition as long as the vines will permit. The result is that in mid-summer the ground will be covered with the largest and most delicious watermelons that one could desire.

Here is an additional proof of the importance of level culture.

### American Pomological Convention.

Continued from page 95.

**General Taylor.**—Pear of Maryland and the Taylor pear of Virginia. Dr. Brinckle introduced these and wished to call attention to them. Mr. Hobbs, of Ky., said that a pear called the Taylor had been cultivated in Kentucky many years, regarded as one of the best.

**Emile d'Heyst.**—The President wished to recommend this variety as promising well. It is a seedling of Mr. Berckmans, and dedicated to his son. Mr. Berckman said it was a fine, large pear, ripening in November; fair and as good as can be desired. Adopted.

**Beurre Kennes.**—Recommended by the President, who entertained a high opinion of it. Mr. Hovey also liked it. Adopted.

**Consilier de la Cour.**—The President stated that this pear is nearly as large and handsome as the Beurre d'Anjou. Other members thought well of it. Recommended as promising well.

**Marshall de la Cour, and Duc d'Orleans,** were stated by Mr. Berckmans to be identical. The "Concelia de la Cour" is a distinct variety.

**Comptesse d'Alost.**—The President said this variety very nearly resembled the Bonne de Jersey. Mr. Barry remarked that the Delices d'Ort and the Comptesse d'Ort are identical. It is a fine pear and bears well. The President said that La Marie was a synonym, also. Recommended as promising well.

**Calebasse Delevigne.**—Mr. Breckman's stated that this fruit first came from Van Mon's collection. It is a handsome fine pear and bears well; not a strong grower.

Mr. H. E. Hooker was afraid we were recommending too many varieties as promising well—

many of which the majority of members were unacquainted with. Other gentlemen expressed the same opinion.

After some discussion it was proposed that every member have the privilege of recommending any variety that he may deem worthy of trial, and that their remarks be recorded.

**D'Albert** was proposed by Mr. Hovey.

**Bergen,** was recommended by Mr. Prince and was thought well of by Dr. Brinckle who said it was a large beautiful pear.

**Hagerman** was proposed by Mr. Prince who said it was a seedling of the Seckel.

**Beurre de Langlier** was recommended by Mr. Cabot, who considered it one of the best winter pears. Several other gentlemen also spoke favorable of it. The fruit is fair and the crop abundant; recommended as promising well.

**Osband's Summer** was recommended by Mr. H. E. Hooker. Mr. Barry thought it good, but said it should be picked early. Mr. Prince regarded it one of the most delicious summer pears.

**Bergamotte d'Esperin.** Mr. Reid and Mr. Townsend spoke well of it. The President was not much pleased with it.

**Doyenne d'Alencon.** Mr. Reid recommended this pear as worthy the attention of cultivators; it keeps well until May. Messrs. Prince, Barry, Buist and Walker, all spoke well of this variety. Recommended as promising well.

**Beurre d'Albert.**—Mr. Hovey thought this variety well worthy of notice. Several other gentlemen spoke in favorable terms of it. Mr. Reid thought it rather astringent. Recommended as promising well.

**Bonne des Zee,** Mr. Hovey introduced as worthy of notice. Other gentlemen regarded it in a favorable light. In some places the tree was seen to crack like the Van Mon's Leon le Clerc. Mr. Prince thought the correct name was Bonne d'Essex.

**Delices d'Hardenpont de Belgique** was introduced by Mr. Hovey as good. Other members spoke in favor of it; it was pronounced a fine large pear, melting and juicy, but not of high flavor. Recommended as promising well.

**Delices d'Hardenpont de Angers,** was also proposed by Mr. Hovey. The President had cultivated it for ten years, and spoke favorably of it. Mr. Cabot thought it almost equal to the White Doyenne. Recommended as promising well.

**Fondante de Chareuse.**—Mr. Cabot would like to call attention to this pear as one worthy of cultivation. It was well spoken of by several members. In eating in October and November. Recommended as promising well.

**Beurre Nantais.**—Mr. Barry named this pear as beautiful and delicate, resembling the Belle Lucrative just then passing out of season. The President considered this a charming pear. It had a great many good qualities. Recommended as promising well.

**Graslin.**—This pear was introduced by Dr. Brinckle. Several members expressed a good opinion of it. Ripens in November and December. Mr. Frost has fruited it three years and was well pleased with it.

## The Home Circle.

### ESSAYS ON HEALTH—No. 8.

#### THE MUSCLES.

The muscles are our laborers. They string up the whole frame. They rig the ship for the sea of life. They are the ropes and chords and pulleys that hold together and manage the fearfully and wonderfully made structure in which we dwell. The muscles make two great requirements. The first is to be well fed, the second to be well exercised. Their food they get from the stomach, their exercise in the daily avocations and amusements of the man. Exercise they must have or they will neither have size, health or strength. This exercise should be vigorous and often and regularly repeated. The day should be devoted to some kind of exercise. Agreeable labor and innocent amusements constitute the best exercise. Daily labor is the daily blessing of the muscular system. "In the sweat of thy brow shalt thou eat thy bread," was the righteous benediction of God on the muscles of the body. Labor is the great muscle maker. Without it muscles wither and become effeminate. Let the world labor, men, women and children labor in agreeable avocations, and exercise in harmless and active amusements, let idleness be banished, let sedentary life be well interspersed with active and agreeable exercise, always followed by proper repose, let life be active, busy, stirring, cheerfully humming its chorus of praise in the activities of honest and noble pursuit, and the goddess of health would love to crown our humanity with her mantling beauty.

#### THE BRAIN.

We must say but little, and yet we feel that we would say much of the brain, which we would use as expressive of the whole nervous system; for we seek practical utility, not scientific exactness. The brain is the centre of the nervous system, the seat of mind, sensation, motion. Nerves, which seem to be but parts of the same substance, go out from it and ramify the whole body. They divide and sub-divide till they reach every fibre of the whole body, so that the point of a needle cannot be put through the skin without touching a nerve and causing pain. The brain is exercised in motion, sensation, and mental action. Any motion, sensation or mental action that to the natural man is pleasant, is promotive of health; any that is

unpleasant is unfavorable to health. Hence, pleasurable pursuits, amusements, avocations should be constantly engaged in. The mind should be kept busy with them. They give buoyancy to the physical spirits, to the motions of the body. Sorrows, griefs, dislikes, contentions and vexations are against health, and greatly against it. Let the heart be at peace, let the mind be wholly engaged in the pursuit of pleasurable objects, let the conscience repose quietly in the right, let the whole soul be in love with the true, the beautiful and the good, and the body will receive a constant invigoration from within which will greatly promote its health and well being.

#### WOMAN IN THE GARDEN.

Much in these days is said about the sphere of woman. Of this vexed question we have nothing now to say. The culture of the soil, the body and the soul are our themes. Rich soils, healthy bodies, pure, cultivated souls, these are what we are aiming at. And to this end we recommend that every country woman have a garden that she keeps and dresses with her own hand, or at least that she supervises and manages. The culture of strawberries, raspberries, blackberries, gooseberries, currants and garden vegetables are as delightful and profitable as anything in which woman can engage. She may sprinkle her garden well with flowers. All the better for that. A snowball in this corner, a rose in that, a dahlia bed there and a moss border here will not be out of place. Only let the substantial and useful constitute the chief part. A touch of the ornate like a ribbon on a good bonnet is not in the least objectionable. In all the schools the girls study Botany. In all families the women ought to practice botany. It is healthful, pleasing and useful. The principles of horticulture are the principles of botany put into practice. Farmers study agriculture, why should not their wives and daughters study horticulture? If any employment is feminine, it would seem that this is. If any is healthy this must be. If any is pleasureable none can be more so than this. A rich bed of strawberries, a bush of blackberries or currants, a border of flowers produced by ones own hand, what can well afford a more rational satisfaction? We say to all our country sisters, have a garden if it is only a small one, and do your best with it. Plant it with what pleases you best, with a good variety, and see what you can do with it. What woman cannot raise beets,

tomatoes, melons, onions, lettuce and furnish her own table with them? What woman cannot plant a raspberry bush or currant, or gooseberry and tend it well? Come, good women, study your health, your usefulness and happiness and your children's also. \*

### AIR AND HEALTH.

Do all our good housekeepers understand that pure air is the first requisite of good health? The life blood of our bodies gets its life principle from the air, or at least the support of the life principle. To breathe impure air is as deleterious as taking small doses of poison. In our travels in the country we have often noticed that sleeping rooms are small and often poorly ventilated. Sometimes they are close under the roof and several beds in one room; generally they have low ceilings and small windows. Often they are but little more than large enough for a bed, ceiled up and plastered and the window nailed down. We have often been shown into rooms to sleep that seemed as though the air was stagnant and almost putrid, and yet it was with the utmost difficulty that we could get a window open or any ingress for fresh air.—Let housebuilders see to it, that all sleeping rooms be large and airy, and easily ventilated and with high ceilings. Let all housekeepers give due attention to ventilating their rooms. Keep the best air circulating through them all the time, day and night. Better sleep out of doors than too many in a room, or in too small rooms. Sitting rooms, pantries, sick rooms, closets, &c., should be especially attended to in this respect. The good housekeeper is very careful to scrub and wash and dust; let her be more careful to keep her house full of pure air. Cleanliness is an article of our creed, but fresh air comes before it.

How often we hear of people feeling wearied, dull, stupid, yawnish when they wake in the morning, and having to go out into the air and wash and exercise before they begin to feel like themselves. This is generally owing to sleeping in confined air, too small rooms, or too many in a room. One should always feel like a bird the moment he wakes in the morning, and so he will, if he is well and sleeps in pure air and enough of it. Better be short of food and raiment, of money and friends than pure air. This is one of the evils of wealth and warm houses. Log houses are often healthiest because they are open. We believe in comfortable houses, but more in fresh air. \*

### COLDS.

Some people are prone to have colds. All people have colds occasionally. They are so common that everybody knows what they are and what sensations attend them. They are occasioned chiefly by heats, indoor confinements, hot foods and drinks, warm rooms and sudden exposures. They lead to many fevers, rheumatisms, consumptions, neuralgies and other diseases; and in many ways weaken and injure many constitutions. They should be avoided as one would avoid the cholera or small pox. And as soon as taken should be attended to and broken up. Especially in children should they be broken up at once. They often plant the seeds of early disease and decay in children. Many parents lose their children early, and wonder why, and yet they often had severe colds, long and lasting.

The best way to manage a cold is to sweat it out at the beginning, and then be very prudent for a few days, about exposure, diet, exercise, &c. One takes cold much easier when fatigued. When the system is full of health and strength, and its habits regular and right, it never takes cold, whatever be the changes of the weather. Colds may be entirely avoided, and this by healthy living; that is, good diet, never above milk warm, regular and proper habits, regular bathing, fresh air, good exercise, avoidance of all kinds of excesses, sleep enough, cheerful spirits, warm and dry feet and a general prudence against exposures.

Every mother should know how to manage colds, and especially how to avoid them. Children should be much in the open air, often bathed, well clad and fed, sleep in cool, fresh air, use only cool drinks, at least none hot, and play and exercise all they wish. One of the secrets of healthy children is good management against colds. It is not cold weather that gives colds. On the contrary cold is the best preventive of colds, cold air, cold bathings, cold rooms, &c. Everything hot prepares the systems for colds, by opening the pores, occasioning sweat, relaxing the muscles and over exciting the nerves. Too warm clothes is especially to be avoided. Attention to the subject is one thing needed. \*

### EDUCATION.

Many harbor the absurd idea, that because one intends to be a farmer, a mechanic, or something that does not require much learning, therefore if he has a knowledge of simple addition, subtraction and multiplication, *that's enough*; and as for grammar one can talk good enough

for anybody without studying it. Now that is a mistake. Have we not seen instances enough to convince any reflecting mind, of old farmers who have spent their lifetime in hard toil, sit down in misery, decrepitude and ignorance, and mourn out their last days, saying, "*O if I could but read!*" whereas had they been educated they could spend their few remaining days in reading and communicating their ideas for the benefit of their fellows, or in transacting some light business, but which they are now totally unqualified to perform. Boys *arise* and be somebody, and leave off carrying "that stone in the bag."

T. D. Jr.

Madison Co., Ill.

### PLEASANT WEATHER.

Thank God for pleasant weather!

Chant it, merry rills!

And clap your hands together,

Ye exulting hills!

Thank Him, teeming valley!

Thank Him, fruitful plain!

For the golden sunshine,

And the silver rain,

Thank God, of good the Giver!

Shout it, sportive breeze!

Respond, oh tuneful river!

To the nodding trees!

Thank him bud and birdling!

As ye grow and sing!

Mingle in thanksgiving

Every living thing!

Thank God, with cheerful spirit,

In a glow of love,

For what we here inherit,

And our hopes above!

Universal nature

Revels in her birth,

When God, in pleasant weather,

Smiles upon the earth.

**A SWEET VOICE.**—A sweet voice is indispensable to a woman. I do not think I can describe it. It can be, and sometimes is cultivated. It is not inconsistent with great vivacity, but it is often the gift of the gentle and unobtrusive.—Loudness or rapidity is incompatible with it. It is low but not guttural, deliberate but not slow. Every syllable is distinctly heard but they follow each other like drops from the fountain. It is like the cooing of a dove, not shrill, nor even clear, but uttered with that subdued, and touching readiness, which every voice assumes in moments of deep feeling or tenderness. It is a glorious gift in woman—I should be won by it more than beauty—more even than by talent were it possible to separate them. But I never heard a deep sweet voice from a weak woman. It is the organ of strong feelings and thoughts, which have laid in their bosom till their sacredness almost hushes utterance.—*N. P. Willis.*

### DOMESTIC RECEIPTS.

**POTATO BREAD.**—Boil and peel a dozen mealy potatoes; rub them through a sieve; mix them thoroughly with twice the quantity of flour or meal; add sufficient water to make dough of ordinary consistence; ferment in the usual way with hop, potato or pea yeast and bake in rather a hot oven.

**APPLE BREAD.**—Boil to a pulp one dozen well flavored, sweet or moderately tart apples; mix the fruit with twice its quantity of wheaten flour or meal; ferment and bake in the usual manner.

**PUMPKIN BREAD.**—Stew and strain the pumpkin, stiffen it with a little corn meal, and then add as much more wheaten flour with the necessary quantity of potato yeast; bake two hours.

**RICE BREAD.**—To one pint of rice boiled soft and two quarts of wheat meal add a handful of corn meal; mix with milk to make it mould like wheat bread, and ferment with yeast.

**SWEET BROWN BREAD.**—Take one quart of rye-flour; two quarts of coarse corn meal; one pint of wheat meal—all of which must be very fresh; half a tea-cup full of molasses or brown sugar; one gill of potato yeast. Mingle the ingredients into as stiff a dough as can be stirred with a spoon, using warm water for wetting. Let it rise several hours, or over night; then put it in a large deep pan and bake five or six hours.

**GRAHAM BREAD.**—Make the sponge of unbolted wheat meal in the ordinary way, with either hop or potato yeast, but mix it rather thin; add a little sugar or molasses to suit the taste. Be sure and mould the loaves as soon as it becomes light, as the unbolted flour runs into the acetous fermentation much sooner than the bolted or superfine flour, and bake an hour and a quarter or an hour and a half, according to the size of the loaf.

**DOMESTIC BREAD.**—For two loaves of the ordinary size, take eight potatoes, pare them, slice very thin, and boil until quite soft, then mash to a fine pulp, and add a little by little, two quarts of boiling water, stirring until a starch is formed; let this cool, and then add one third of a cup of new yeast. This forms the "sponge," which should remain in a moderately warm place for ten or twelve hours, or over night, until it becomes very light and frothy, even if a little sour it is of no consequence. When the "sponge" is ready, add flour, and work it until you have formed a stiff, firm mass. The longer and more firmly this is kneaded, the better the bread.

Let the kneaded mass remain, say for a half to three-quarters of an hour to rise, then divide into loaves, put into pans, where it should remain say fifteen minutes, care being taken that it does not rise too much and crack, then put the loaves into a quick oven and bake, say three quarters of an hour. If the oven is not hot enough the bread will rise and crack, if too hot the surface will harden too rapidly and confine the loaf.

## Editor's Table.

### To Correspondents.

We have a number of excellent communications on hand and others in type which we have been compelled to lay over for want of room. We have also received numerous letters of inquiry upon various topics, some of which, owing to the press of business, incident to the opening of a new volume we have found it impossible to give immediate replies. For this seeming neglect, our friends, we are sure will excuse us. In future we hope to have more time at command and be able to give more prompt answers, either by letter or through the columns of the Valley Farmer.

**SOWING BLUE GRASS SEED.**—J. T. S., wishes information as to the best time of sowing "Blue Grass seed, &c." Blue grass seed should be sown during the latter part of winter, or as early in the Spring as the ground can be put in a suitable condition to receive the seed. In an open field, a quart or two of clover seed may be sown in addition, to advantage. These seeds sown alone in July or August, as our correspondent suggests, would not do well. The weather is generally too dry and too hot at that time to insure success. Our friend's enquiries should have been answered before.

**NO POST OFFICE.**—We are greatly annoyed by subscribers neglecting to put their Post office address in their letters. We have just got a letter with a list of five subscribers, viz: Rev. W. H. Price, Jno. G. Price, Jno. Brook, Jno. Hartt, and Jeremiah White, and no post office is given, and we don't know where to send the papers. Who can inform us?

**WM. GREATHOUSE** in renewing his subscription, writes from Oakland Grove, Balls Co., Mo. We can find no such post office on our books and presume he gives us the name of his farm, instead of the post office at which he receives his paper. Of course we cannot give the credit till we know the P. O. A little care on the part of our patrons would save us a great deal of labor.

**ADDITIONS TO CLUBS.**—We are always glad to receive additions to clubs at club rates. Cannot our subscribers send several more at these rates from every neighborhood where the Valley Farmer circulates? We know that with a little personal effort the number of our subscribers could be doubled at every post office in the Mississippi Valley. We labor hard, night and day for our subscribers and if they will now and then work for us they will do us a great kindness.

**SALE OF SHORT HORN CATTLE.**—Mr. Edwin G. Bedford, near Paris, Ky., informs us that he will sell some time in June next, his entire herd of thorough bred Short Horns. In this herd is the famous bull, PERFECTION, and the beautiful cow LAURA, portraits of which appeared in the last volume of the Valley Farmer. This sale will afford an excellent opportunity for our friends to supply themselves with some most excellent animals.

**WINTER IN ILLINOIS.**—A friend in Macoupin county writes: "We have had a very cold winter. The weather has been fine on our stock, as they stand the cold much better than wet and mud—those at least that are not provided with shelter. Fears are entertained that the wheat is very much injured by the extreme cold, as the ground has been for the principal part of the time bare of snow. The worms were very destructive on the wheat in the fall and a large portion of the crop was sown a second time, and consequently was very small when the winter set in." R. E. D.

**A VALUABLE JACK.**—Mr. James Hall, of Bourbon Co., Ky., recently sold a Jack, two years old last spring, for the sum of \$2,400. Mr. J. F. Pany, of Scott county was the purchaser. To this animal was awarded the first premium at the late State Fair, at Paris.

**WIRE FENCE.**—J. T. H. wishes our opinion on the new style of wire fence, made of woven-wire. The woven-wire has advantages over the method formerly practiced of using small, straight wire, in great lengths, in as much as the woven-wire yields to the expansion and contraction caused by the variations in temperatures more readily than straight lines of wire. Fence of this kind, well put up, we think would be found serviceable. Wire less than No. 8, we would not recommend.

Recent experiments in straight wire fence have proved more successful than formerly, as larger wire has been used and more efficient means have been employed to preserve uniformity of tension. This object secured in an economical and substantial manner, we think that wire fence will be found valuable in prairie countries. But the wire should not be less than one quarter of an inch in diameter.

**NEVER TOO LATE.**—It is never too late to subscribe for the Valley Farmer. We have added a host of new subscribers to our list this year and are still able to send all the back numbers from January.

**PAMPHLETS RECEIVED.**—We acknowledge our obligations to Mr. James Queen, 264, Chesnut street, Philadelphia, Pa., dealer in Mathematical, Optical and Philosophical Instruments, &c., for a copy of A Hand Book, descriptive of the various Barometers now manufactured and their uses, together with the Dew Point Hygrometer, &c. Also to the same gentleman for an illustrated catalogue of the various instruments manufactured and for sale at his establishment.

**EBEN WIGHT, Esq.,** Corresponding Secretary of the Massachusetts Horticultural Society has conferred a favor by sending us a neat volume containing reports of the Committees of the Society, Schedule of prizes, &c.

**THE REGISTER OF RURAL AFFAIRS for 1857,** published by Luther Tucker & Son, may be had of J. M. Crawford, St. Louis, Mo., next door to the Valley Farmer office.

## Presentation of Plate to Hon. J. R. Barrett,

PRESIDENT OF THE ST. LOUIS AGRICULTURAL ASSOCIATION.

A very interesting meeting of the citizens of St. Louis city and county, was held on Wednesday Dec. 31st, at the "Mechanics' Exchange," for the purpose of presenting to Hon. J. R. BARRETT a magnificent testimonial of their appreciation of his services as President of the above named Association.

The meeting was organized by the appointment of J. H. LIGHTNER, Esq., as President, Messrs. T. T. JANUARY and ISAAC H. FISHER as Vice Presidents, and HENRY W. WILLIAMS, Secretary.

The testimonial consisted of an elegant silver service, twenty-one pieces in number, and comprised a complete tea set, with large salver, a large silver pitcher with goblets and salver to match, and twelve beautiful napkin rings. Upon each of the salvers was the following inscription:

### "PRESENTED

By the Mechanics and Agriculturists of St. Louis county and the stockholders of the St. Louis Agricultural and Mechanical Association, to

HON. J. R. BARRETT,

As a testimonial of their high estimate of the ability displayed by him as the President of the Association.

ST. LOUIS, December, 1856."

Upon taking the Chair, Mr. Lightner remarked as follows:

**FELLOW CITIZENS:** We have met on this occasion as the friends of Agriculture and the Mechanic Arts, to acknowledge our indebtedness to the Hon. J. R. Barrett for his faithful and untiring exertions in behalf of those interests.

Mr. BARRETT drew up the bill which incorporated the St. Louis Agricultural and Mechanical Association, and through his exertions and well directed efforts it became a law. We all know with what zeal and activity he labored in getting the Association fairly under way—how earnestly he pushed forward the work of preparing the Fair Grounds, and the success which crowned his efforts in permanently establishing these grounds in such a manner as to draw from all who have seen them, the admission that they are unsurpassed in the Union.

Laborers of this character are worthy of all commendation, for it is the honest farmers' toil that furnishes the staff of life, and the mechanic's ingenious and skillful workmanship that affords us the comforts we so bounteously enjoy. Then let the good work go on freely, and prosper; for it is LABOR—ingenious and skillful—working for itself and others, and reaping its own rewards—that has made us the prosperous people that we are, and will make us what we are to be. All honor to those who aid in its onward progress.

Mr. HUDSON has been invited to make the presentation of plate to Mr. BARRETT, and will now address you.

Mr. HUDSON then spoke as follows:

**MR. PRESIDENT AND FELLOW CITIZENS:** I deem it a very high compliment that I have been selected to make this presentation of your beautiful testimonial. I do not know whether I have been chosen as an agriculturist, as a lawyer, or a citizen. I am in a small way a farmer, suppose that I am to attribute my selection on this occasion to that fact, and the only regret I can have is, that one better qualified than myself was not chosen.

Fellow citizens, I have resided among you for twenty-two years, and have, for twenty years past, been known to, and received favors from, all classes of our citizens, but am more indebted to the mechanics of St. Louis for benefits conferred, than to any others, and am proud to speak in their behalf in the presentation of this testimonial to Mr. Barrett, the President of the Agricultural and Mechanical Association.

To establish such an association and place it upon a permanent basis, required zeal, talent, activity and untiring energy, and these the association was fortunate in combining in their worthy first President, Mr. Bar-

rett. Not a mechanic in the city has failed to see and appreciate his labors, not only in their behalf, but for all interested in the growth and prosperity of our city. Through his industry and devotion to the cause, the Association in this the border city of the West, loomed up and stands far ahead of any other similar association in the Union. The Fair of the Association was something for St. Louis to be proud of, as showing the enterprising character of her people. But it was something more than this. It brought to the whole valley of the Mississippi, a knowledge of the arts and trade of St. Louis. It brought thousands and tens of thousands here to witness our prosperity, and to learn that we of St. Louis, with our merchants, mechanics and manufacturers might be useful to them, and they, as well as ourselves, might profit from a close intimacy.

This association is called an Agricultural and Mechanical Association—I do not know which, if either, may be entitled to precedence. All branches of industry are mutually dependent upon each other. Agriculture furnishes the breadstuffs, without which, those engaged in mechanical pursuits could not live; while the mechanic furnishes to the farmer those implements without which he could not well till the soil. They are, therefore happily linked together in this Association. No jealousy can arise between them. Equal in position, their only rivalry will be to discharge alike, faithfully, their duties to the community.

The condition of the association is most prosperous. Its capital stock paid in, amounts to some sixty thousand dollars. The real estate purchased for the fair grounds, was bought at a low price, and must greatly enhance in value. The association was organized in January, 1856. Several months had elapsed before a suitable piece of land could be had, and when the land had finally been selected, only four months remained to prepare the same for holding the Fair in October.—During that four months the President was constantly busy, devoting to it all his energies. The magnificent Amphitheatre and fairy-like Pagoda, arose, as if by magic. The grounds were enclosed and graded, walks and avenues opened, stalls erected, water pipes laid from the reservoir, about a mile distant, and all accomplished in the brief space of time allotted. I visited the ground with a friend from the East, who expressed great astonishment at the extent and beauty of the grounds and buildings, remarking that it would do honor and credit to the East! Well might he say so. We can do EVERYTHING in a manner which would do honor and credit to the East, or any other part of the Union. We have mechanics and manufacturers—artisans of every description, whose skill, and talents and taste, would be honorable and creditable anywhere.

The fair was a brilliant affair, yet may not have pleased everybody. The old lady at the party will admit that the girls dance very well, but will add, "they don't dance as I used to could!" [Applause.]

It was not expected that everybody would be satisfied. I was not satisfied, for Mr. January had the effrontery to show colts with me! [Applause.] Many others were not satisfied, but a great many people were satisfied, and show with pride, as I do, some of the tokens of their success at the fair.

But whether satisfied or not, it was beyond the control of the President and Directors to please all the competitors. The visitors unanimously awarded THEIR praise, and in pronouncing it a success, paid high compliment to Mr. Barrett, to whom they were so largely indebted for it.

I know something of his efforts to pass the bill incorporating the association, and after he had succeeded in that, he gave up his private business to run about and get the stock subscribed; he "bored" me until I was forced to subscribe! (Applause), and stuck to the work until he had the required amount of stock taken. He continued to work day and night without remuneration or hope of reward. While many of our large property holders slept he was at work upon that which all will admit greatly promoted the interests of every property holder in St. Louis.

The Agricultural and Mechanical Association, and many citizens who are not members, regarded some slight token as due him—not as remuneration—not as pay—this testimonial could not do that, but I have been

requested to present it as a testimonial of respect—of their entire satisfaction with his conduct. (Applause.)

The success of the first Fair in St. Louis, is only an earnest of what they will be in future. Every citizen now claims an interest in it. Those who have borne off prizes in it, will be eager again to enter, and those who failed to win the premiums, will be induced to make redoubled efforts to win success at the next exhibition. The Agriculturists of our county deserve much praise for their efforts, but they will renew their zeal for the next occasion. Our mechanics exhibited unsurpassed evidences of their skill, showing that they stand inferior to none, but they will outshine themselves at the next Fair.

It is too late now to say that St. Louis is not a manufacturing city. Witness her numerous foundries, machine shops, carriage establishments, iron works, cotton factories, glass manufactories, saddlery establishments, sugar refineries, soap and candle factories, rope-walks, hemp factories, &c., &c. The day is not far distant when the reputation of St. Louis as a manufacturing city, will be as well established as is now her commercial supremacy chief among the cities of the valley of the Mississippi.

One word more. There is to be a National Fair. It ought to be held at St. Louis. Other cities are bidding for it. We can out bid them.

We have everything in our favor, in the run. Our position is more favorable than any other city in the West, so far as facilities for access is concerned. We have twelve hundred miles of river navigation towards the South, for the convenience of the Southern States: we have thousands of miles of river navigation for the convenience of those at the North—the Missouri stretching through our own State to the plains of Kansas—the Mississippi for Iowa, Wisconsin and Minnesota; the Illinois river and her railroads for that State, and the Ohio and Mississippi and Alton and Terre Haute Railroads and connections, bring to us the teeming population and rich products of Illinois, Indiana, Ohio, and the Eastern States.

If this association will take this matter in hand it can be accomplished, and the National Fair be held at St. Louis.

In conclusion, allow me to say that this association, and you sir, its President, have my warmest sympathies and earnest hopes for your future success. I now present to you, sir, this testimonial in behalf of the farmers, mechanics and citizens of St. Louis city and county, which they, prompted by the kindest and best feelings that actuate us, have prepared for you.

Mr. BARRETT replied as follows:

Mr. President, and to you, sir, the organ of the Agriculturists and Mechanics of St. Louis County:

I shall not attempt to express the deep sense of my obligations to you and to those you represent, for the distinguished mark of your kindness and favor. Indeed, words could not be found adequate to the task, for

"You set a debt of that account before me,

Which shows me poor and bankrupt, e'en in hope."

This evidence of approbation, is the more gratifying, because it is for services connected with an undertaking, which must redound to the welfare and glory of our fair city, our noble State, and the whole valley of the Mississippi—because it emanates from those to whom St. Louis is greatly indebted for her proud position among the cities of the nation, and this may be regarded as further manifestation of their interest in her future destiny.

Already, it may be said, "her trade and commerce consisteth of the trade of all nations;" standing, as she does, at the geographical centre of a vast region, containing 1,200,000 square miles of the most fertile land upon the globe, surrounded by millions of acres of the richest and most varied minerals in the world, it must be apparent, to the most superficial observer, that the proper encouragement of her agriculture and mechanical interest, will result in prosperity unexampled, and a greatness far beyond the expectation of the most sanguine.

By the highly complimentary manner in which you have referred to my action as the President of the St. Louis Agricultural and Mechanical Association, you have done me honor far beyond my deserts. Much credit

is due to other members of the Board of Directors, and to other members of the association, who have been at all times indefatigable and efficient in their generous efforts to promote the objects of the Society. Much is due also to the Master Builders and Mechanics of this city, who were ever ready to give all the assistance in their power. And all must acknowledge that the encouragement so freely given by the press, and the interest manifested by the community generally, went far to secure the success of the enterprise.

With heart overflowing with thanks I accept the present thus kindly tendered. I shall prize it for its beauty, the elegance of its workmanship, for its intrinsic value, but it shall be my proudest boast that it was a testimonial from the Agriculturists and Mechanics of St. Louis county.

"They are the noblest benefits, and sink

Deepest in man; of which, when he doth think,

The memory delights him more, from whom

Than what he hath received."

The remarks of Mr. Barrett were received with great applause, and at the conclusion Mr. Lightner remarked that the discussion of words having ended, the meeting would proceed to discuss the solids and fluids before them.

A table extending nearly the entire length of the hall was bounteously covered, and those assembled proceeded at once to test the quality of the eatables and drinkables.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY, for the year 1887, containing Treatises on Rural Architecture, Laying out and Managing Fruit, Flower, and Kitchen Gardens, with practical suggestions on various subjects connected with Rural pursuits; also brief Hints on the Raising and Management of Poultry; List of Fruits recommended by the American Pomological Society, List of Nurserymen, and Agricultural Implement Makers in the United States and Canada. Illustrated with 80 engravings, representing farm houses, cottages, laying out gardens, &c., &c.

This is a most valuable little work of 144 pages, that will be found useful in many departments of trade, particularly to dealers in seeds, implements, nurserymen &c., as well as to every Rural Inhabitant. We recommend it with confidence. It will be sent Post-paid, to any address, on the receipt of twenty-five cents in postage stamps by the publisher, Joseph Harris, at the office of the "Genesee Farmer," Rochester, N. Y.

THE VOICE OF IOWA—Is a neat little journal of 32 pages, devoted to Education, the first No. of which we have received. It is published monthly in pamphlet form, by James L. Enos, Esq. From the number before us, we should judge that it will prove an efficient educational journal. Terms \$1 per annum. Address James L. Enos, Cedar Rapids, Iowa.

AMERICAN POMOLOGICAL SOCIETY.—We are indebted to Hon. Thos. Allen of St. St. Louis, Mo., one of the Vice Presidents of the American Pomological Society for a copy of its proceedings, held last autumn at Rochester, New York.

The volume contains the excellent address of Marshall P. Wilder, President of the Society, the discussions of fruits, reports of committees on new native fruits, several valuable reports from State committees, &c., &c. To the fruit grower and pomologist this is a valuable work.

**THE GOOD TEMPLAR AND TEMPERANCE MAGAZINE.**—We have before called attention to this charming monthly. We can commend it heartily, both for its own sake and for the sake of the noble enterprise in which it is so earnestly engaged. It is published at St. Louis, by B. H. Mills, at \$1 per year.

**THE BRITISH PERIODICALS.**—We have before spoken of the excellence of these works. To lovers of first class literature they are invaluable. They consist of the following: "London Quarterly," (conservative); "The Edinburgh Review" (Whig); "The North British Review" (Free Church); "The Westminster Review" (Liberal); "Blackwood's Edinburgh Magazine" (Tory). Terms—for the four Reviews and Blackwood, for one year, \$10. For either of the Reviews, \$3. For any two of the Reviews, \$5. For all four of the Reviews, \$8. For Blackwood, \$3. Address Leonard Scott & Co., Publishers, 54, Gold street, New York.

**HOW TO WRITE.**—A new pocket manual of composition and letter writing. This is the first of a series of popular Hand Books and embraces hints on Penmanship and the choice of Writing Materials, Practical rules for Literary composition in General, and Epistolary and Newspaper Writing, PUNCTUATION and PROOF CORRECTING in Particular; and directions for writing Letters of Business, Relationship, Friendship and Love; illustrated by numerous examples of genuine epistles, from the pens of the best writers; to which are added Forms for Letters of introduction, Notes, Cards, &c., and a collection of Poetical Quotations. Price, in paper 30 cts., muslin 50 cents.

Address Fowler & Wells, No. 308. Broadway, N. Y. We have received the above work, been much instructed by it, and give it our hearty approval. Every man, woman and child ought to have it. If read carefully, it is worth three years schooling to every young man and lady in the land.

**AMERICAN VETERINARY JOURNAL.**—We have just received the March number of this valuable work upon a long neglected branch of medical science. It is always interesting and abounds in valuable matter, important to every person in any way interested in the management of domestic animals and should constitute one of the publications in the list taken by every farmer.

There is a great amount of suffering caused to farm animals, to say nothing of the pecuniary loss that often occurs in the treatment of diseases through the ignorance that prevails. It is edited by Dr. Geo. H. Dadd, a thoroughly educated veterinary practitioner. It is published at 97 Union street, Boston by S. N. Thompson & Co.

We are also indebted to the editor for a most admirably executed lithographic print of the horses brain showing in one view on an enlarged scale the nerves and in another the arteries, in their natural color, with full descriptions and explanations.

**GODEY'S LADY'S BOOK.**—We acknowledge the receipt of the first three numbers of this invaluable monthly for 1857. Godey still stands unrivalled in the excellence of its engravings, the number and finish of its fashion plates, and in the talent of its contributors. The ladies of our acquaintance always speak in raptures of Godey's Lady's Book. Terms, one copy, one year, \$3.

Two copies, \$5; three copies, \$6. Address L. A. Godey, 113, Chestnut street, Philadelphia, Pa.

**RAY COUNTY AGRICULTURAL SOCIETY.**—At a meeting of the Stock Holders of the Ray County Agricultural Society, held on Monday, March 2d 1857, the following officers were elected for the year 1857.

PRESIDENT—Col. B. G. Brown.

VICE PRESIDENTS—Col. L. C. Bohannon, Chas. A. Watkins.

SECRETARY—W. D. Rice.

DIRECTORS.—Geo. I. Wasson, Jno. P. Hubbell, James P. Hughes, Hon. G. W. Dunn, S. A. Richardson, Andrew Wilson, Dr. W. W. Mosby, H. P. Settle, John B. Shaw.

On motion, Resolved, that a list of officers names be sent to the Editors of the Valley Farmer for publication.

**VERMONT STOCK JOURNAL.**—D. C. Linsley, Esq author of a valuable work on Morgan Horses, recently published by C. M. Saxton & Co., has commenced the publication of the above journal at Middlebury, Vermont. It is to be issued monthly, 16 large octavo pages in each number, at 50 cents a year. To stock growers it will be valuable, particularly to those engaged in raising fine horses.

### Castor Beans.

We have received several letters in reference to an article on the culture of Castor Beans, published in the February number. The yield mentioned is considered large. By reference to the article it will be seen that 50 to 70 bushels was mentioned as an extraordinary yield, dependent upon favorable seasons, etc. There seems to be a difference of opinion on this point, we suppose, the manner of cultivation, condition of soil, and the season as to drouth and wet—as well as early and late frosts affect greatly the yield per acre. The yield like other crops is dependent in a great measure upon the skill and labor or other conditions. Others again are of the opinion that we recommend planting them too near together. If any of our readers will embody, in a short article full directions, as to the best mode of cultivation, management of the crop, &c., we shall be glad to publish it. "In a multitude of counsellors there is wisdom," and the best way of doing the thing is what we are all seeking for. And if there is a better way of cultivating Castor Beans than that already mentioned, we would be glad to have it for the benefit of our readers.

**CHINESE HEMP.**—We are anxious to see this new variety of Hemp fully tested in Missouri this season; it has proved a most valuable acquisition in Kentucky where it was first introduced. We have accounts of it from undoubted authority which give the yield from 1500 to 2,000 pounds of dressed hemp per acre. It thrives well on old worn land. We understand that the seed of the Chinese hemp can be procured at the seed stores in St. Louis.

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## CONTENTS OF NO. 4.

Indian Corn—Its Culture.....	101
Patents on Agricultural Implements.....	102
Progressive and Profitable Farming—Farm of Thomas H. Collins.....	103
Lime Kilns.....	104
Geological Report in relation to the soils of Kentucky.....	106
Culture of Tobacco.....	108
Old Tan bark for Manure; How to Exterminate Gophers.....	109
Advice to Young Farmers, No. 2.....	110
Seed Corn; Hedging and Swindling.....	111
What causes Smut in Wheat; Hop Culture in Mo., 113	
Remedy for Smut in Wheat; Improvement in Farming.....	114

## THE VEGETABLE GARDEN.

Calendar of operations for April.....	114
---------------------------------------	-----

## STOCK RAISING DEPARTMENT.

Ruta Baga, Sugar Beets and Mangel wurtzel for Stock; Sheep.....	115
The Morgan Horse, "Black Hawk".....	116
Sheep Shearing Machines; The Horse.....	117

## HORTICULTURAL DEPARTMENT.

Culture of the Strawberry.....	119
A premium essay on the Cultivation of the Grape in Missouri.....	121
Maps of orchards—Labels for Fruit Trees.....	123
Watermelons; Am. Pomological Convention.....	124

## THE HOME CIRCLE.

Essays on Health, No 8; Women in the Garden.....	125
Air and Health; Colds; Education.....	126
Pleasant weather; A Sweet voice; Domestic receipts.....	127
Editors Table.....	128, 129, 130, 131, 132.

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The day of sale will be advertised six weeks previous to its taking place, and at the time it is announced Catalogues will be ready for distribution, and may be had by application to Mr. L. W. Johnson, Spring Station P. O., Woodford county, Ky.

March '57, 2t.

R. A. ALEXANDER.

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